2020 Census 27-29. Post-Enumeration Survey (PES) Operations – 28. CMM

Version: 5.4 – with Annotations v05b

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United States Census Bureau

Table of Contents **(Page#)**

Reading and Understanding the Model

Legend . . . 3

Business Process Model

Context Model . . . 4
50. Conduct PES Initial Housing Unit (IHU) Computer Matching . . . 5
60. Conduct PES IHU Before Followup (BFU) Clerical Matching . . . 6
60.100 Perform Preprocessing for IHU BFU Clerical Matching . . . 7
60.180 Perform IHU BFU Clerical Matching Analyst Review and QC . . . 8
60.230 Prepare Paper Questionnaire Packets and Maps for IHUFU and Ship to RCCs . . . 9
80. Conduct PES IHU After Followup (AFU) Clerical Matching . . . 10
80.30 Receive Completed IHUFU Paper Questionnaire Packets and Maps from RCCs . . . 11
80.190 Perform IHU AFU Clerical Matching Analyst Review and QC . . . 12
80.220 Perform IHU AFU Outlier Review . . . 13
115. Conduct Clerical Geocoding (CGC) . . . 14
115.90 Perform Clerical Geocoding Analyst Review and QC . . . 15
120. Conduct PES Person Computer Matching . . . 16
120.110 Conduct PI to PI Person Computer Matching . . . 17
120.140 Conduct E-Sample to Census Person Computer Matching. . . . 18
120.170 Conduct PI to Census Person Computer Matching. . . . 19
125. Conduct Clerical Residence Status Coding (RSC) . . . 20
125.70 Perform Clerical RSC Analyst Review and QC . . . 21
130. Conduct PES Person Before Followup (BFU) Clerical Matching . . . 22
130.170 Perform Data Preprocessing for Person BFU Clerical Matching . . . 23
130.210 Perform Person BFU Clerical Matching . . . 24
130.220 Perform Person BFU Clerical Matching Analyst Review and QC . . . 25
130.290 Prepare Paper Questionnaire Packets and Maps for PFU and Ship to RCCs . . . 26
150. Conduct PES Person After Followup (AFU) Clerical Matching . . . 27
150.30 Receive Completed PFU Paper Questionnaire Packets from RCCs . . . 28
150.120 Perform Person AFU Clerical Matching . . . 29
150.140 Perform Person AFU Clerical Matching Analyst Review and QC . . . 30

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Major Revision Change History

Date	Description	Author	Version #	Page #'s
08/16/2016	Incorporated changes from SME Reviews	Dan Ladino	0.11-0.13	All
09/28/2016	Incorporated changes from SMEs/IPT	Dan Ladino Aurelia Gardner S. Goggin	0.14-0.26	Various
11/08/2016	Incorporated changes from CM Review	Dong-Nghi Hua	0.27	6-7
11/21/2016	Updates for baseline release (CR 117)	Dong-Nghi Hua	0.28	6
01/13/2017	Updates from CM Reviews (CR 157)	Dong-Nghi Hua S. Goggin	3.0	All
01/27/2017	Updates from CM Reviews (CR 162)	Dong-Nghi Hua	3.1	7-8
02/08/2017	Updates from CM Reviews (CR Pending)	Dan Ladino	3.2	9-15
02/14/2017	Updates for CM to PES change (CR 167)	Dong-Nghi Hua		All
02/27/2017	Updates from CM SME Reviews to create new baseline.	Dan Ladino	3.3	9-15
04/14/2017	Updates from CM Reviews	Dong-Nghi Hua	3.4	All
09/29/2017	Multiple updates to all sub operations	Dan Ladino Gwen Pennington Katherine Turel	3.18	All
11/06/2017	Multiple updates to Matching	Dan Ladino	3.21	All
01/17/2018	Multiple updates to the Matching BPM based on JAD sessions	Dan Ladino	3.22	All
05/31/2018	Updates from CM Reviews	Chidinma Oyedokun	4.1	4,7
07/26/2018	Multiple updates to Matching and Field Operation	Chidinma Oyedokun	4.2	4,11,13-16, 32 33,36,39,40 57,58,60-63
07/25/2018	Updates to CMDE processes	Monique Edmonds	4.4	60 - 78
09/04/2018	CR 3196	Monique Edmonds	4.0	All
12/04/2018	Updates to CMDE processes	Monique Edmonds	4.5	60-78
12/07/2018	Formatting & Pre-OII Process Updates	Monique Edmonds	5.0	All
05/21/2019	Updates from PES DOP Reviews WIP	MITRE	5.1	All
08/29/2019	Updates from PES DOP Reviews	MITRE	5.2	All
10/07/2019	Updates from PES CAPs Reviews	MITRE	5.3	All
04/07/2020	Updates from PES Inputs/Outputs Reviews	MITRE	5.4	All

Table of Contents – Continued **(Page#)**

Business Process Model

150.180 Perform Person AFU Outlier Review 31

170. Conduct PES Final Housing Unit (FHU) Computer Matching/Processing 32

180. Conduct PES FHU Before Followup (BFU) Clerical Matching 33

180.115 Perform FHU BFU Clerical Matching Analyst Review and QC 34

180.135 Prepare Paper Questionnaire Packets and Maps for FHUFU and Ship to RCCs 35

200. Conduct PES FHU After Followup (AFU) Clerical Matching 36

200.67 Receive Completed FHUFU Paper Questionnaire Packets and Maps from RCCs 37

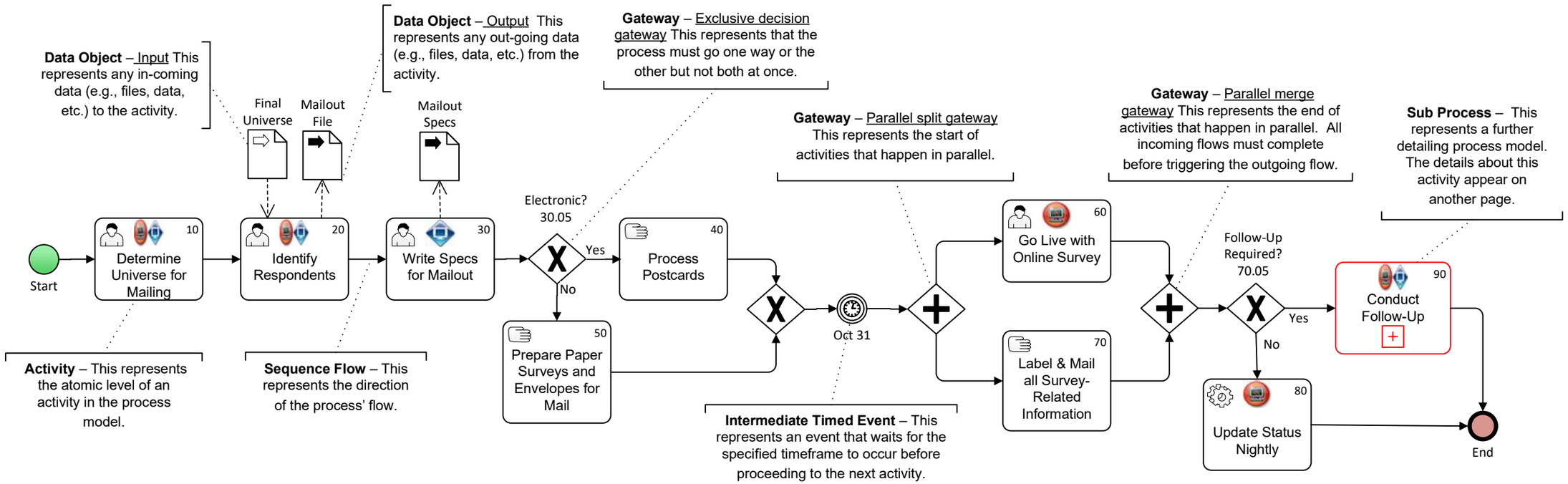
200.270 Perform FHU AFU Clerical Matching Analyst Review and QC 38

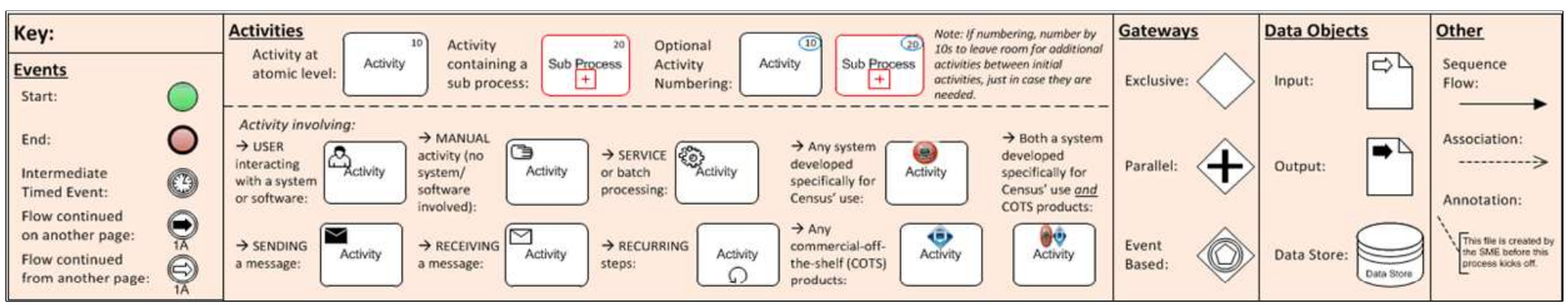
Reading and Understanding the Model

Example Activity Model

BPM Purpose

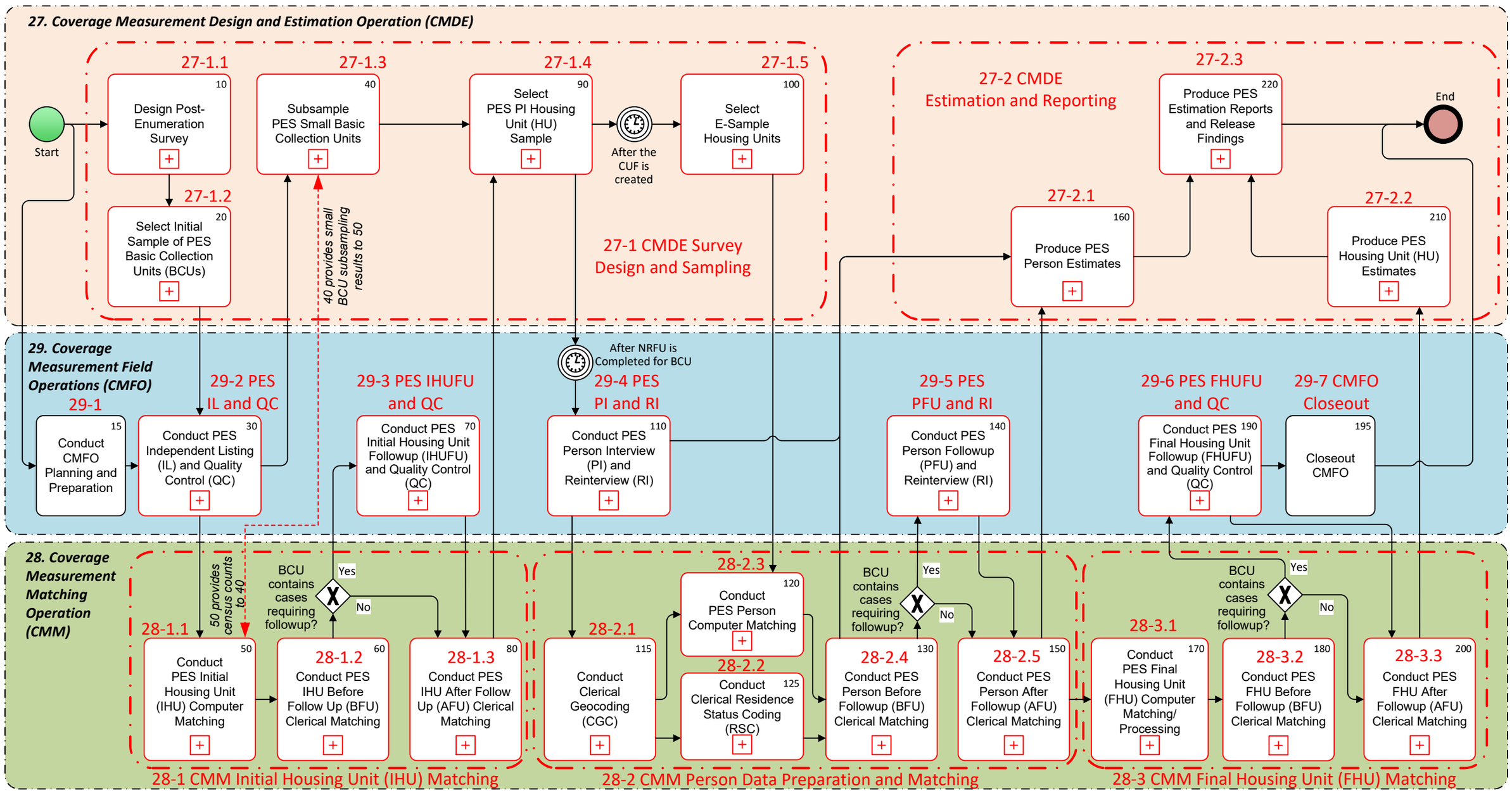
- Describe Census Operations business processes – activities, resources and key milestones
- Provide the details necessary for non-subject matter experts to understand the business process
- Contribute to the requirements development process
- Facilitate the linkage of business processes to IT capabilities
- Capture Operations inputs and outputs





2020 Post-Enumeration Survey (PES) Operations

Purpose: To evaluate coverage of the 2020 Census in order to improve future censuses. The Census Bureau conducts the Post-Enumeration Survey (PES) to measure the coverage of the 2020 Census. The PES is designed to measure the coverage of housing units and people, excluding group quarters and people residing in group quarters.



CMM: 50 Conduct PES Initial Housing Unit (IHU) Computer Matching

Purpose: Initial Housing Unit Computer Matching performs many-to-many matching of PES IL addresses (for HUs) to Census addresses (for HUs and GQs) to identify computer matches and possible matches. The Census and PES IL data are also prepared to ensure consistent coding and standardization before computer matching.

28-1.1 Conduct PES Initial Housing Unit (IHU) Computer Matching

Note: All Process Boxes are: CMM Unless otherwise labeleled.

28-1.1.1 Receive and Process Inputs for IHU Computer Matching

Start Sub-process

CMFO(IL) CMM — 50.10 Receive IL Address List (for Initial Sample of BCUs after Post Processing) [from CMFO BPM 30]

IL Address List

CMDE CMM — 50.20 Receive Sample Design File Vs. 1 [from CMDE BPM 20]

Sample Design File Vs.. 1

GEOP — 50.30 Identify and Send Surrounding BCUs for All BCUs

GEOP CMM — 50.40 Receive Surrounding BCUs for All BCUs

GEOP CMM — 50.50 Extract Census Addresses for Initial BCU Sample

50.60 Create Census IHU Matching Universe File

50.70 Create IHU BCU Control File

Census IHU Matching Universe File

Provide 50.100 Census IHU Matching Universe File to IHU BFU Clerical Matching [to BPM 60]

Provide 50.110 Initial IHU BCU Control File to IHU BFU Clerical Matching [to BPM 60]

CMFO CMM — 50.80 Receive Field Priority Codes [from CMFO BPM 15]

Field Priority Codes

50.90 Create National Prioritization

National Prioritization

CMM CMDE — 50.95 Create Census HU Counts (for Subsampling of Small BCUs) and Provide to CMDE [to CMDE BPM 40]

28-1.1.2 Perform IHU Computer Matching

Needs Small BCU Subsampling? (50.112)

No

Yes

Hold Until Sample Design File Vs. 2 is Received

CMDE CMM — 50.114 Receive Sample Design File Vs. 2 that IDs In-Sample Small BCUs [from CMDE BPM 40]

Sample Design File Vs.. 2

National Prioritization

50.120 Create Match Groups

Census IHU Matching Universe File

IL Address List

50.130 Prepare IHU Data

50.140 Perform IHU Computer Matching to Create Link Pairs between IL and Census Addresses

50.150 Assign Match Status

50.160 Update IHU BCU Control File

Provide 50.170 IHU Computer Matching Results to IHU BFU Clerical Matching as Match Groups are Completed [to BPM 60]

50.180 Provide Updated IHU BCU Control File to IHU BFU Clerical Matching [to BPM 60]

Are All BCUs Matched?

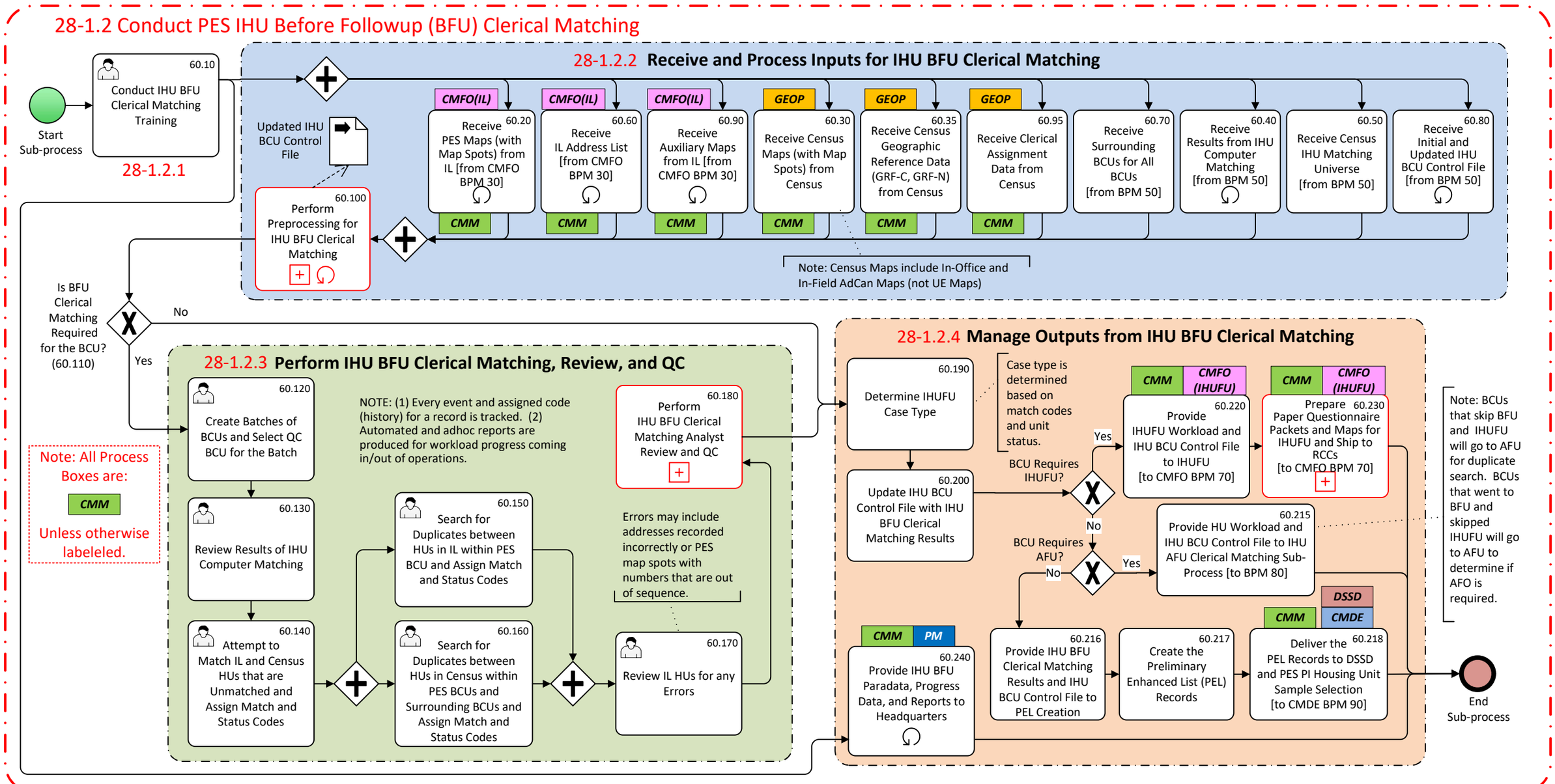
Yes

No

End Sub-process

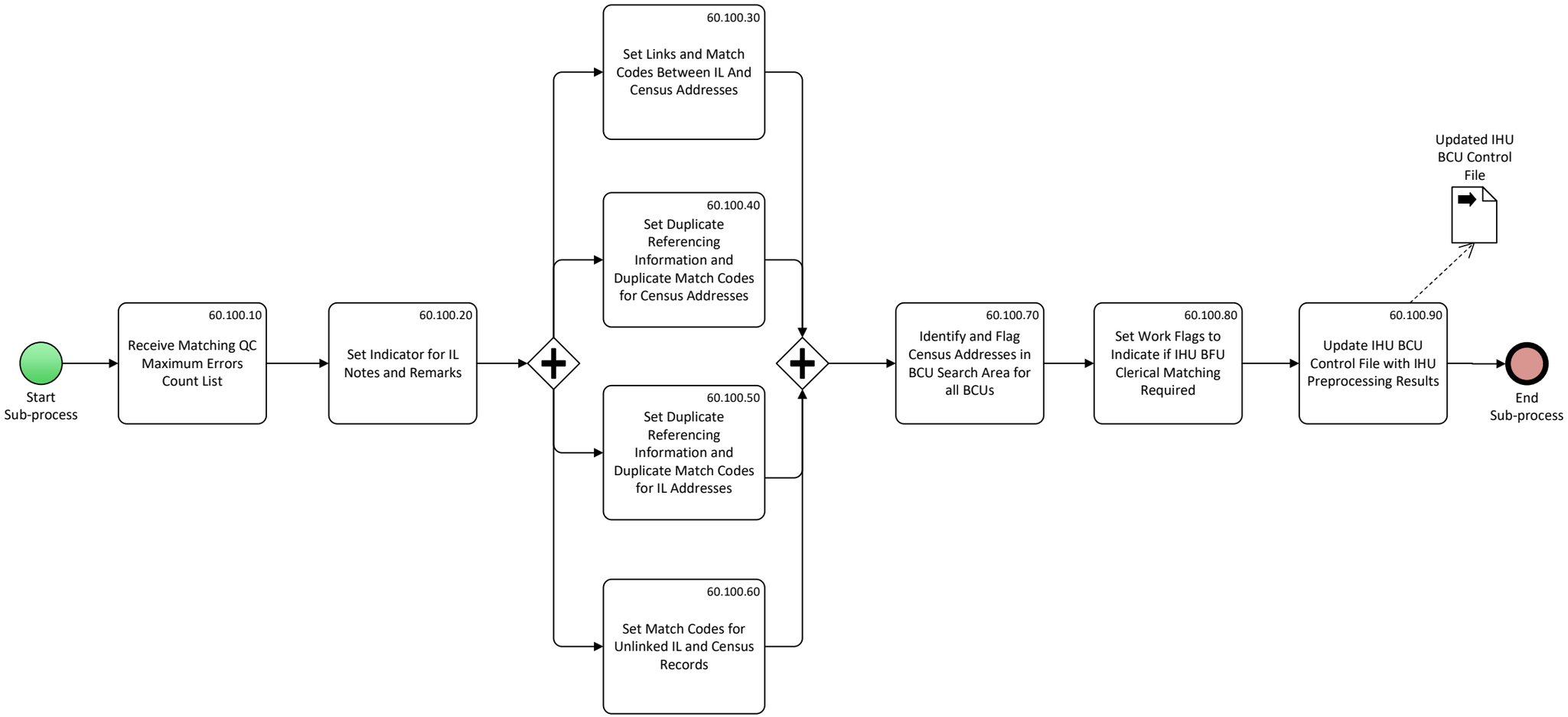
CMM: 60 Conduct PES IHU Before Followup (BFU) Clerical Matching

Purpose: To manually process unresolved cases resulting from the Initial Housing Unit Computer Matching and to identify any errors from computer matching or additional matches. Also links from Computer Matching are coded to use in Clerical Matching.



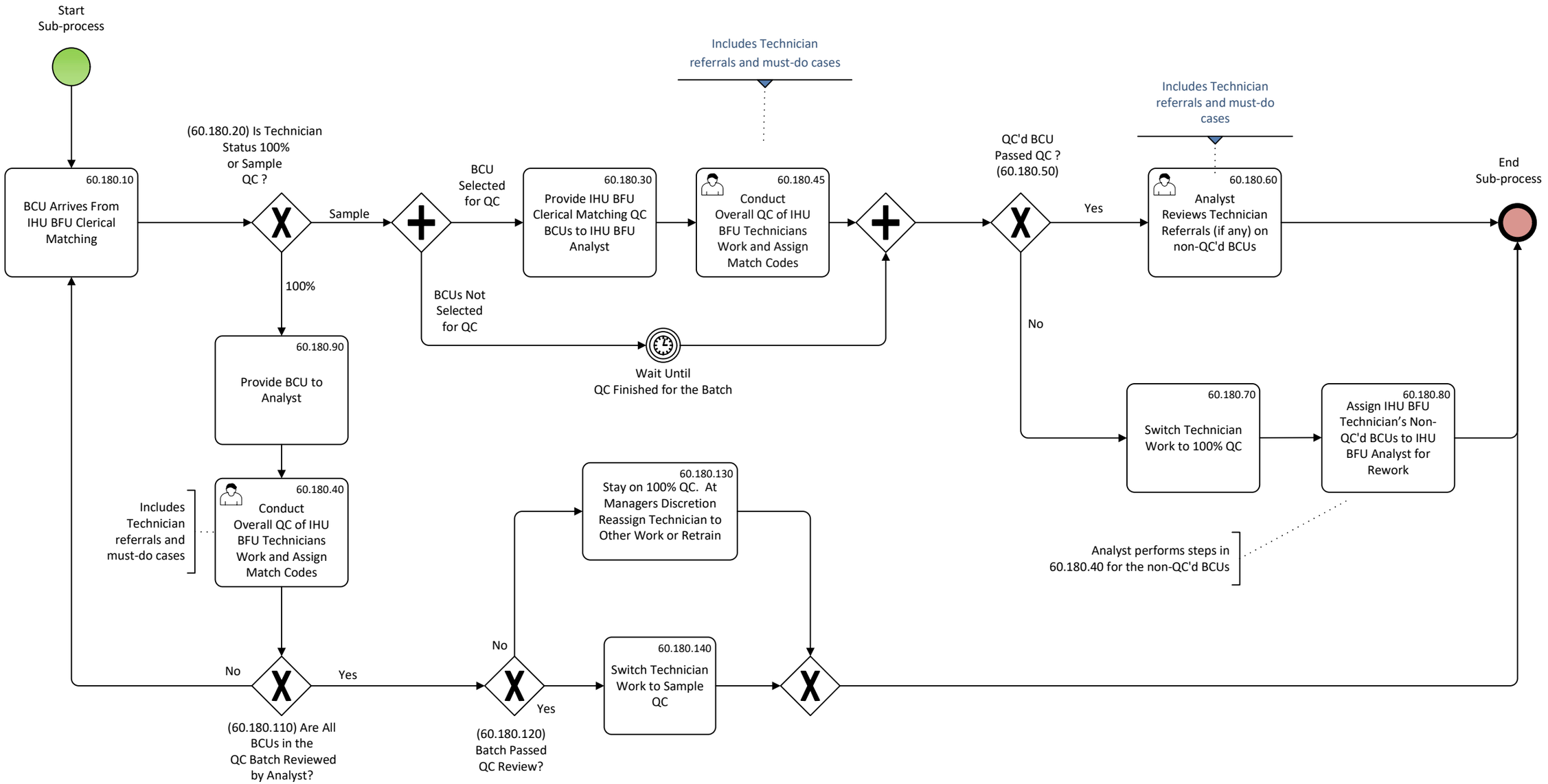
CMM: 60.100 Perform Preprocessing for IHU BFU Clerical Matching

Purpose: To utilize links set in Initial Housing Unit (IHU) Computer Matching to assign match, duplicate and other codes in preparation for clerical matching.



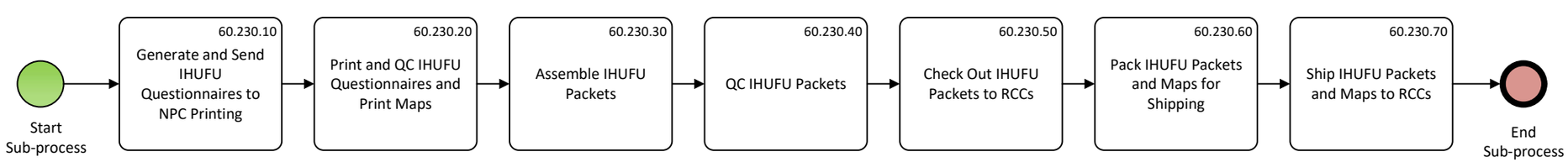
CMM: 60.180 Perform IHU BFU Clerical Matching Analyst Review and QC

Purpose: The clerical matching analysts perform quality control of IHU BFU technician's work and review technician referrals.



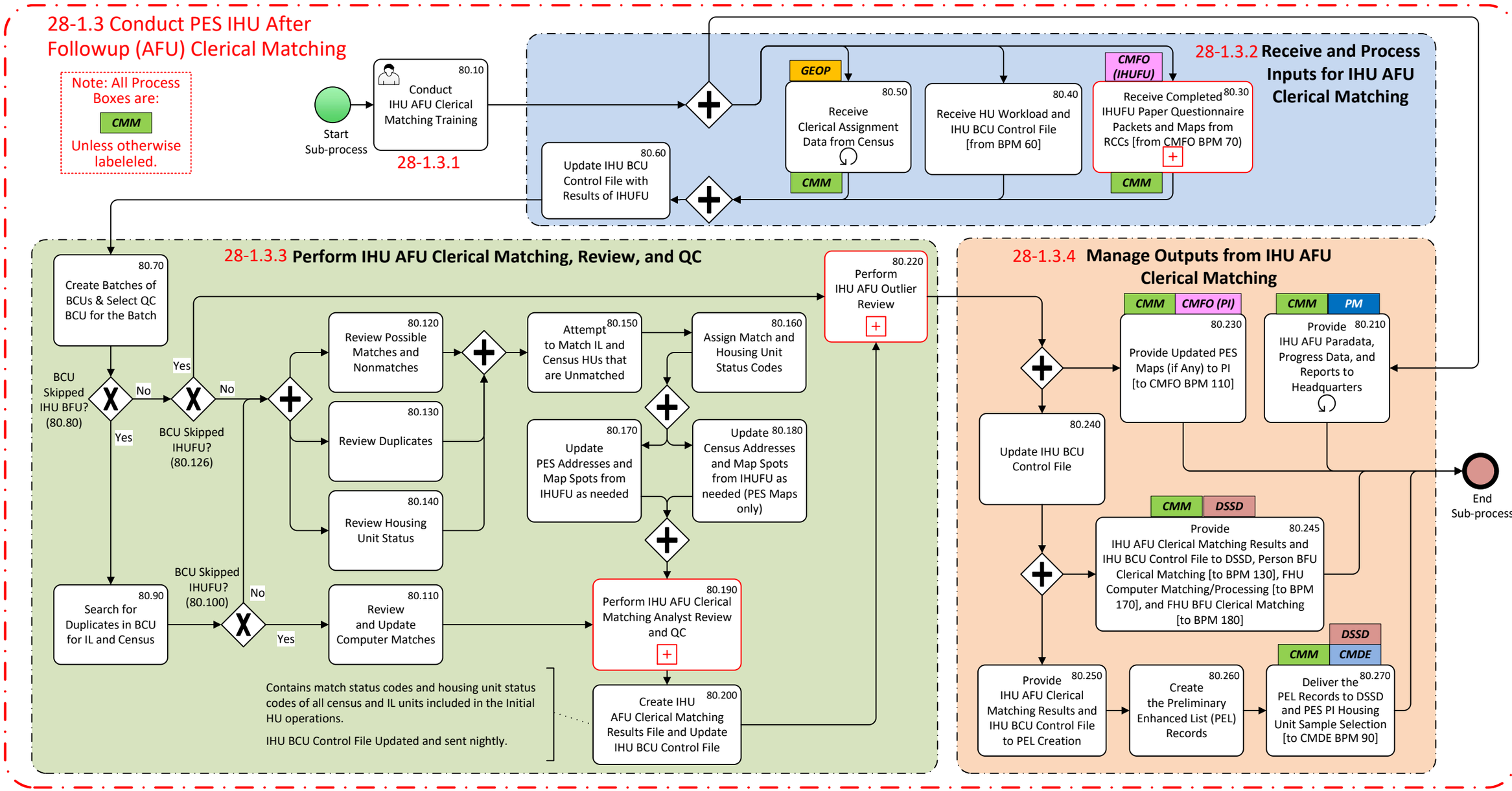
CMM: 60.230 Prepare Paper Questionnaire Packets and Maps for IHUFU and Ship to RCCs

Purpose: To manage the preparation of paper questionnaires and packages for use during IHUFU field work.



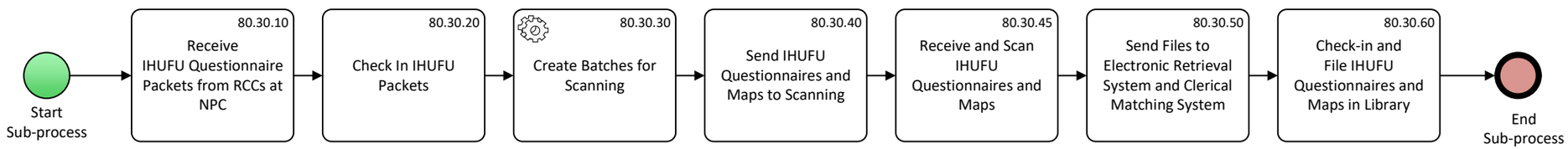
CMM: 80 Conduct PES IHU After Followup (AFU) Clerical Matching

Purpose: Initial Housing Unit (IHU) After Follow Up (AFU) Clerical Matching uses IHUFU data to resolve cases that were sent to followup.



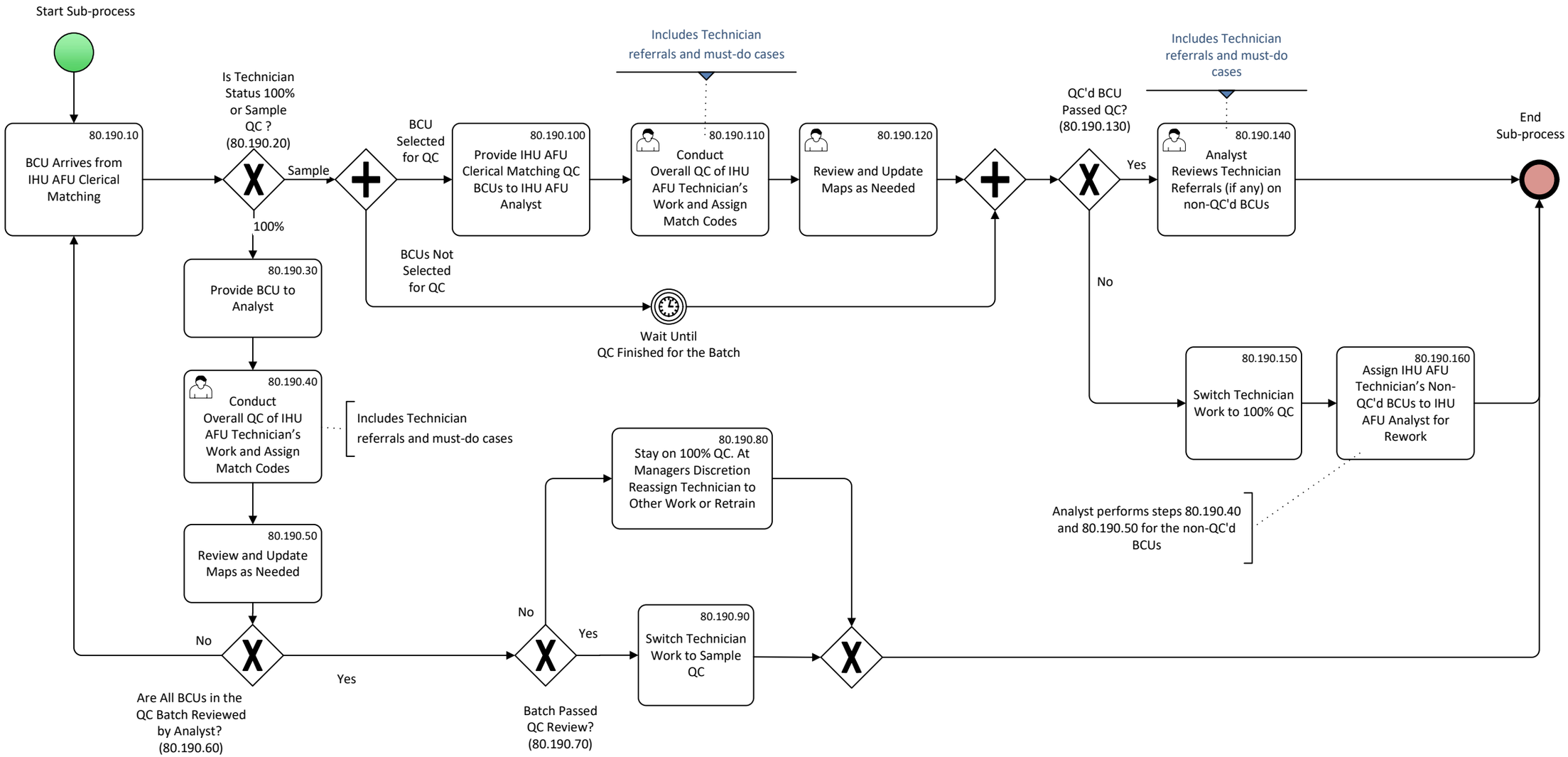
CMM: 80.30 Receive Completed IHUFU Paper Questionnaire Packets and Maps from RCCs

Purpose: To receive the IHUFU paper questionnaires



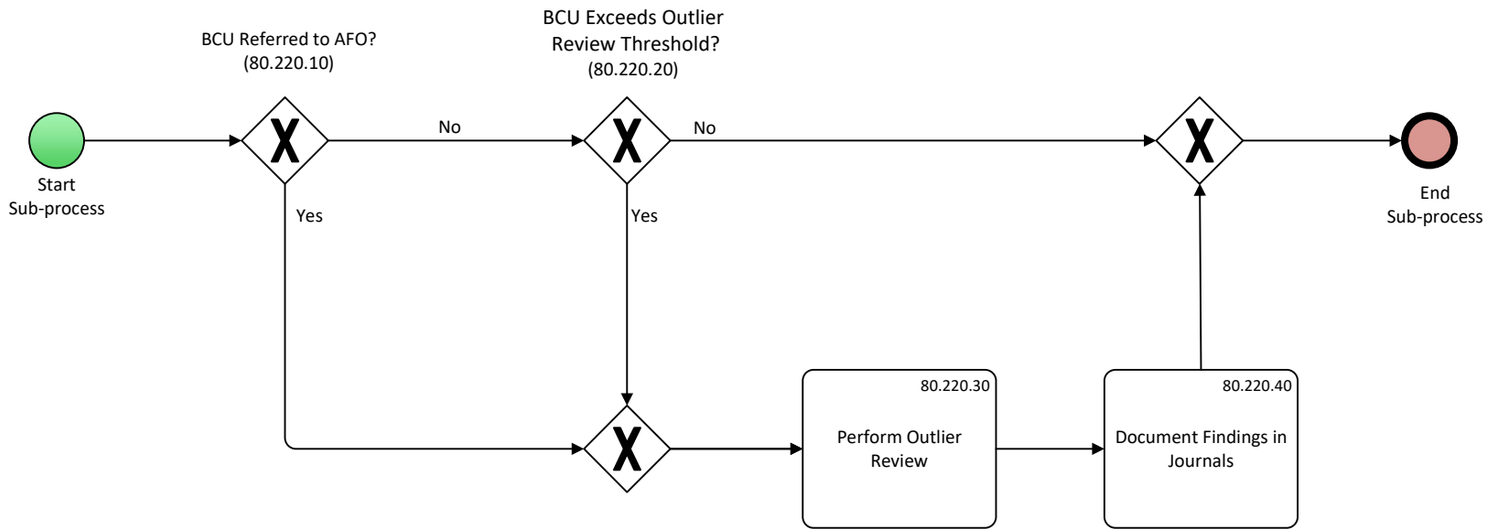
CMM: 80.190 Perform IHU AFU Clerical Matching Analyst Review and QC

Purpose: The Clerical Matching Analysts perform quality control of IHU AFU Technician's work and review technician's referrals.



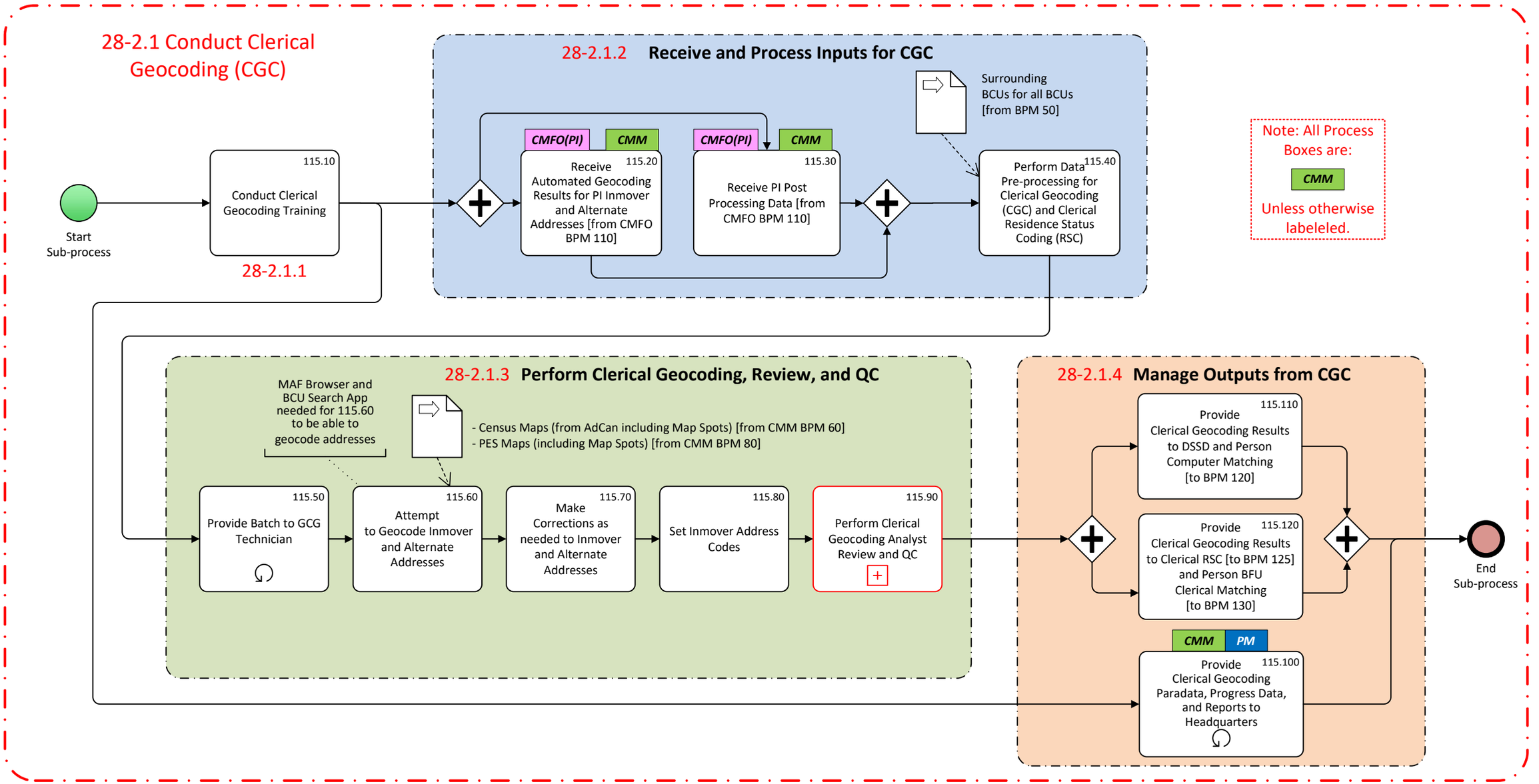
CMM: 80.220 Perform IHU AFU Outlier Review

Purpose: Identify BCUs that require outlier review by analysts and perform IHU AFU Outlier (AFO) Review.



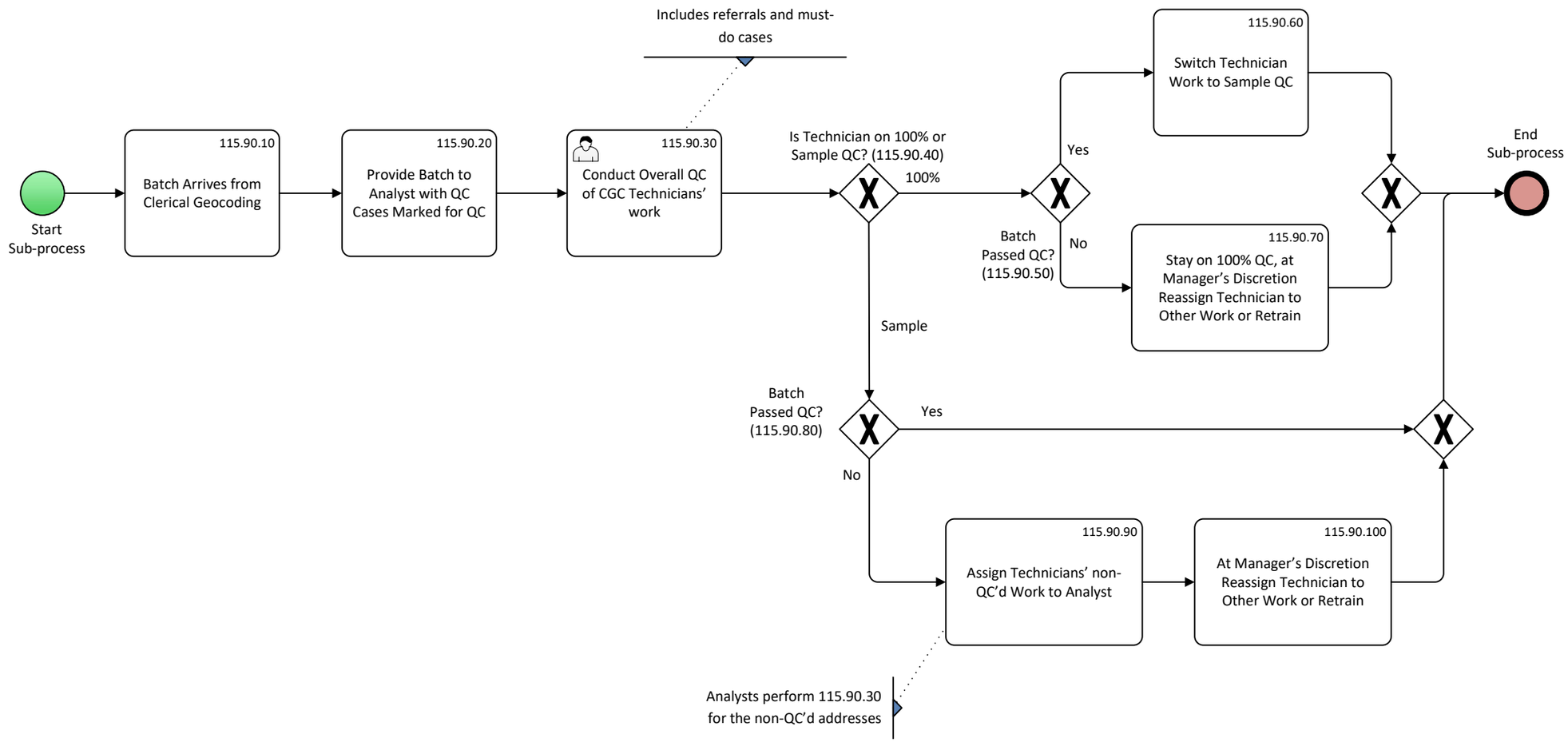
CMM: 115 Conduct Clerical Geocoding (CGC)

Purpose: Clerical matchers attempt to clerically geocode respondent-provided inmover and alternate addresses not computer geocoded by MAF/TIGER.



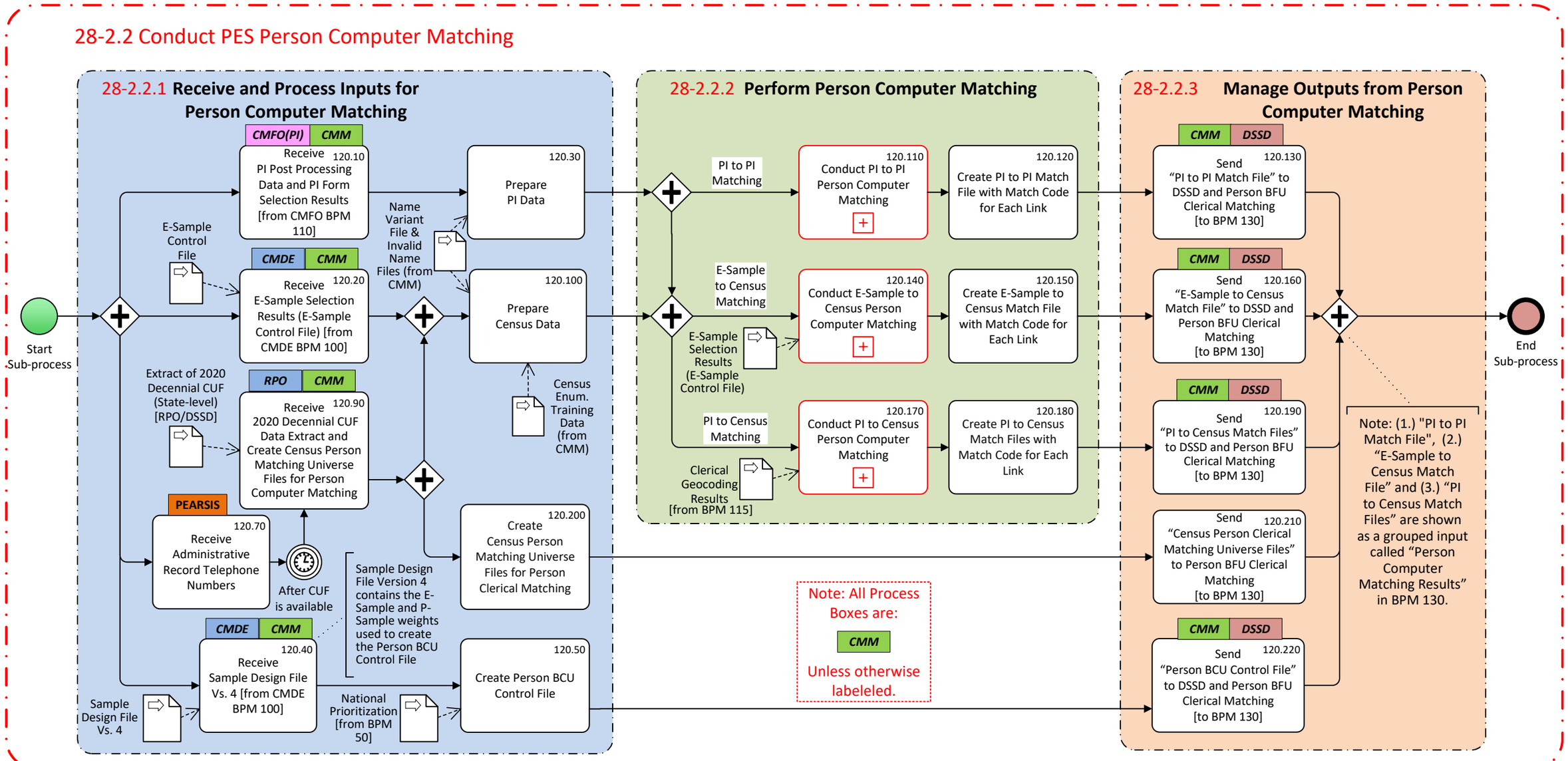
CMM: 115.90 Perform Clerical Geocoding Analyst Review and QC

Purpose: The CGC Analysts perform quality control of CGC Technicians' work and review technician referrals.



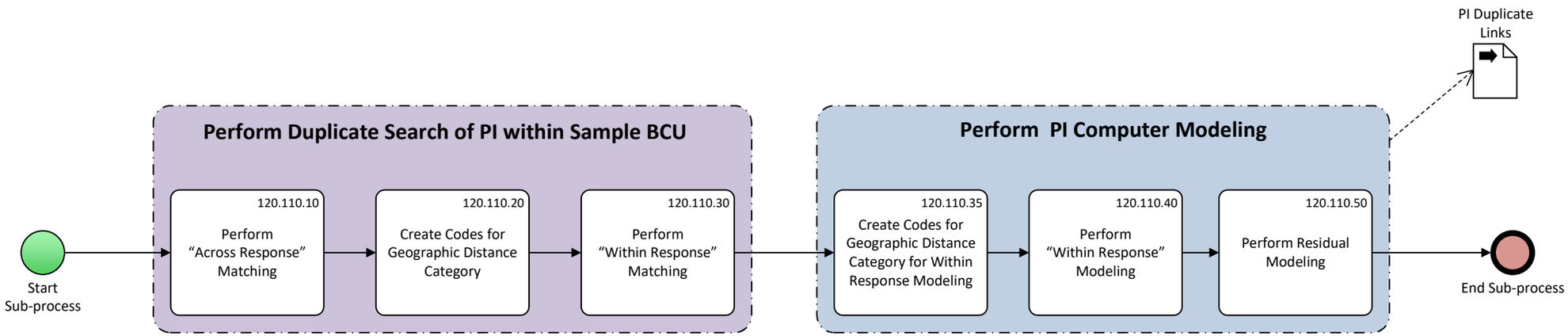
CMM: 120 Conduct PES Person Computer Matching

Purpose: PES Person Computer Matching conducts person record linkage to identify matches and possible matches between the people rostered in the PES Person Interview and the census enumerations; to identify duplicates and possible duplicates between the E Sample and census enumerations; and to identify duplicates and possible duplicates between PI people.



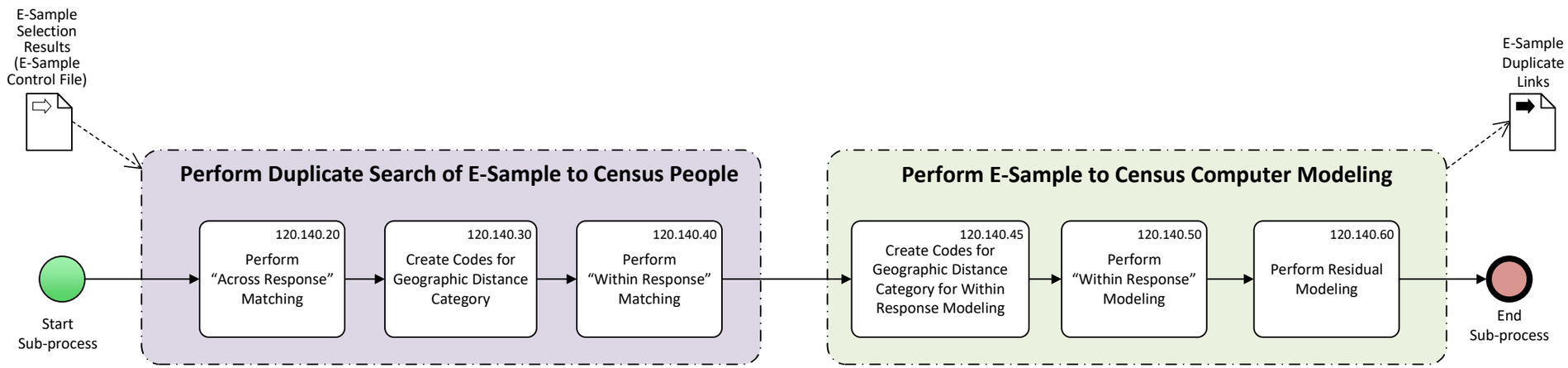
CMM: 120.110 Conduct PI to PI Person Computer Matching

Purpose: PES PI to PI Person Computer Matching attempts to match P-sample people within the PI sample to identify possible duplicate links.



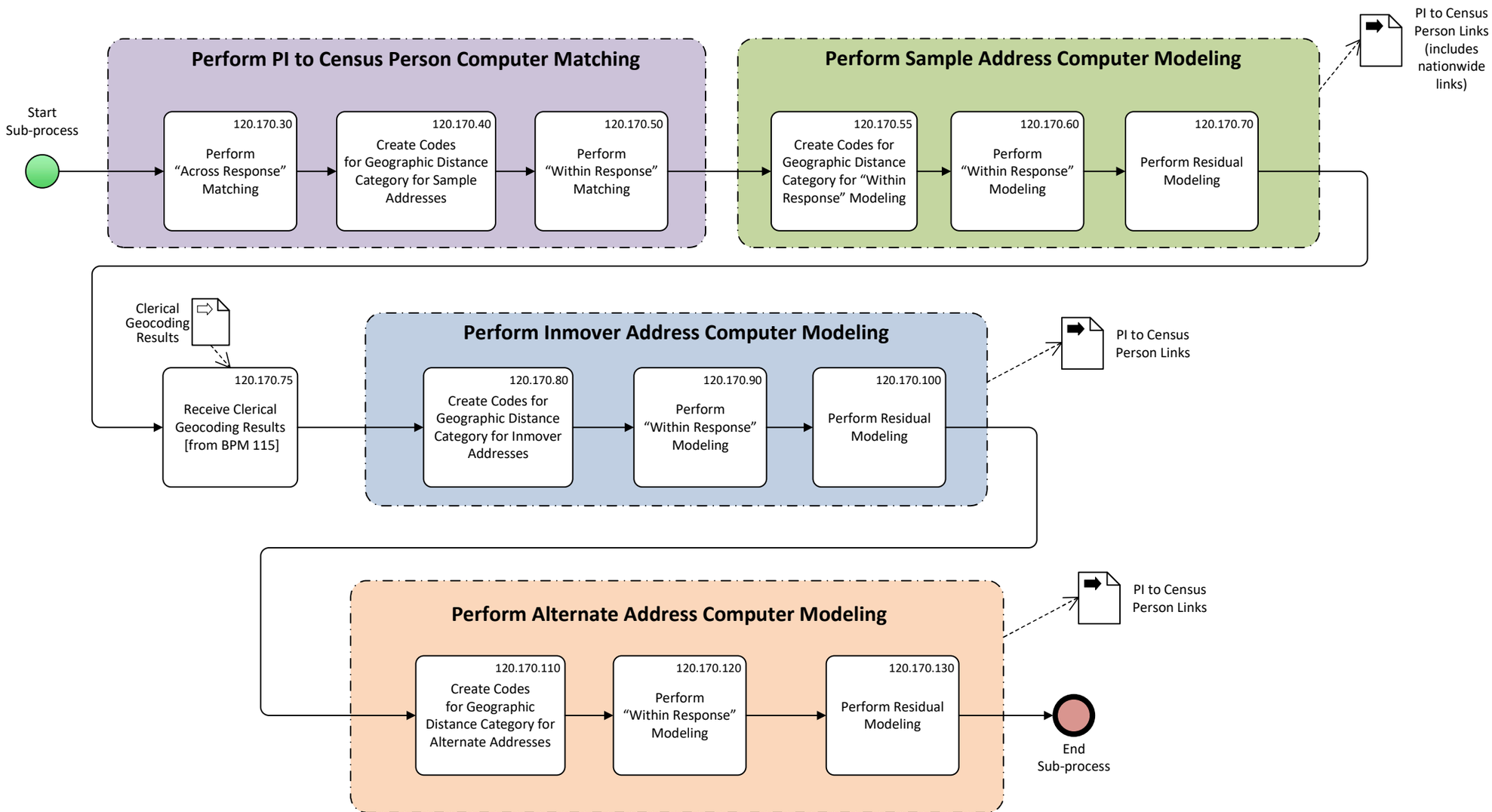
CMM: 120.140 Conduct E-Sample to Census Person Computer Matching

Purpose: E-Sample to Census Person Computer Matching attempts to match E-Sample people with the census enumerations to identify possible duplicate links.



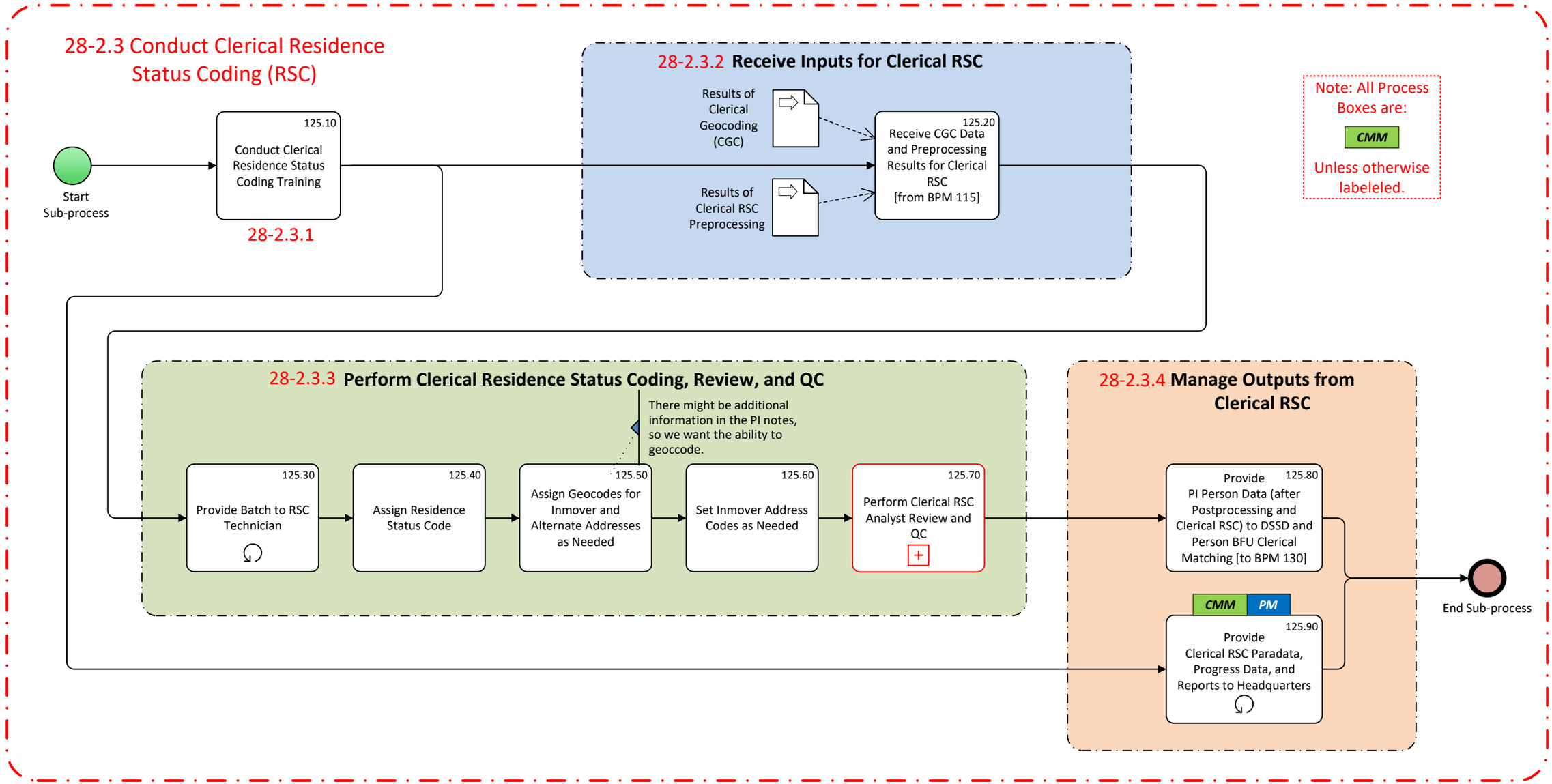
CMM: 120.170 Conduct PI to Census Person Computer Matching

Purpose: PES PI to Census Person Computer Matching attempts to match P-sample people between the PES and the Census enumerations to identify person match links across the PI and Census.



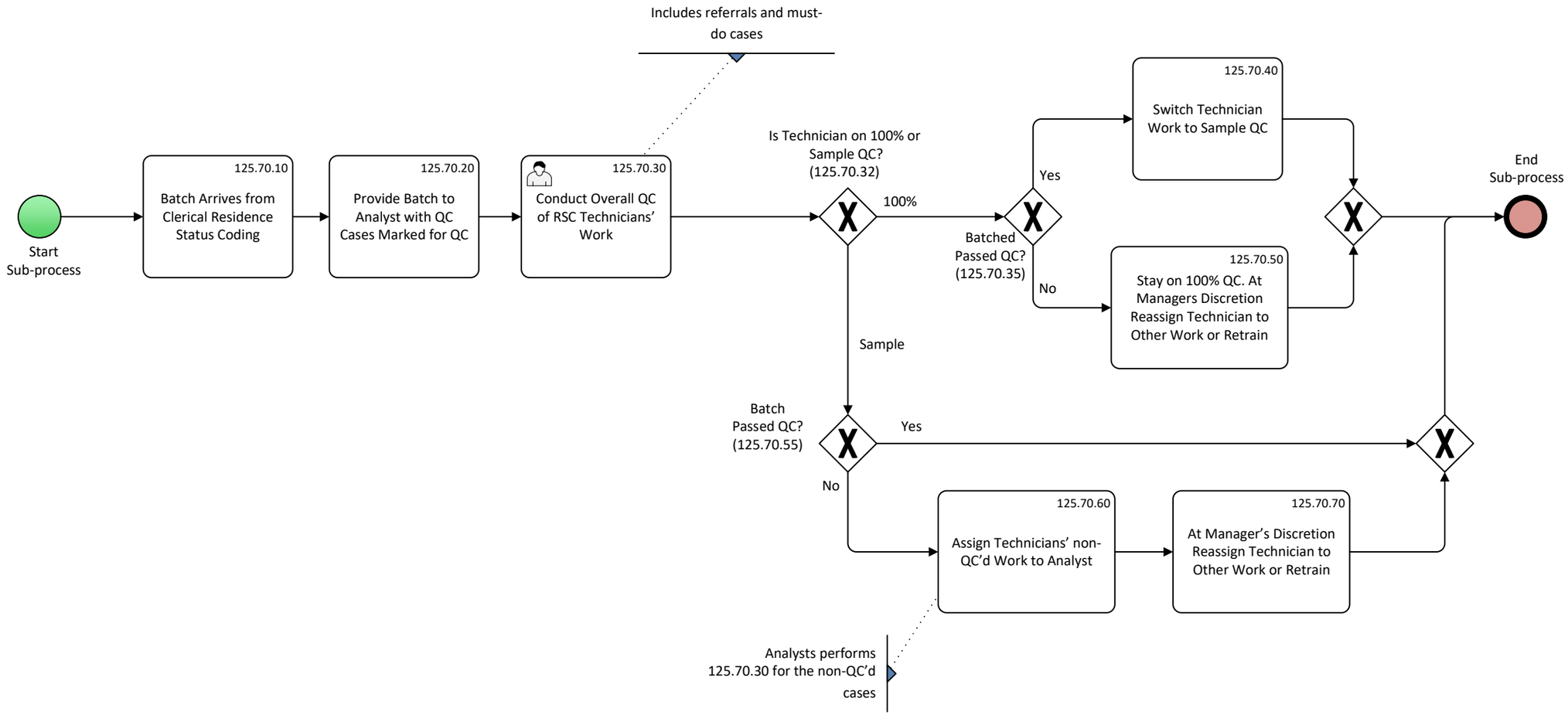
CMM: 125 Conduct Clerical Residence Status Coding (RSC)

Purpose: Clerical matchers assign residence status codes to unresolved records.



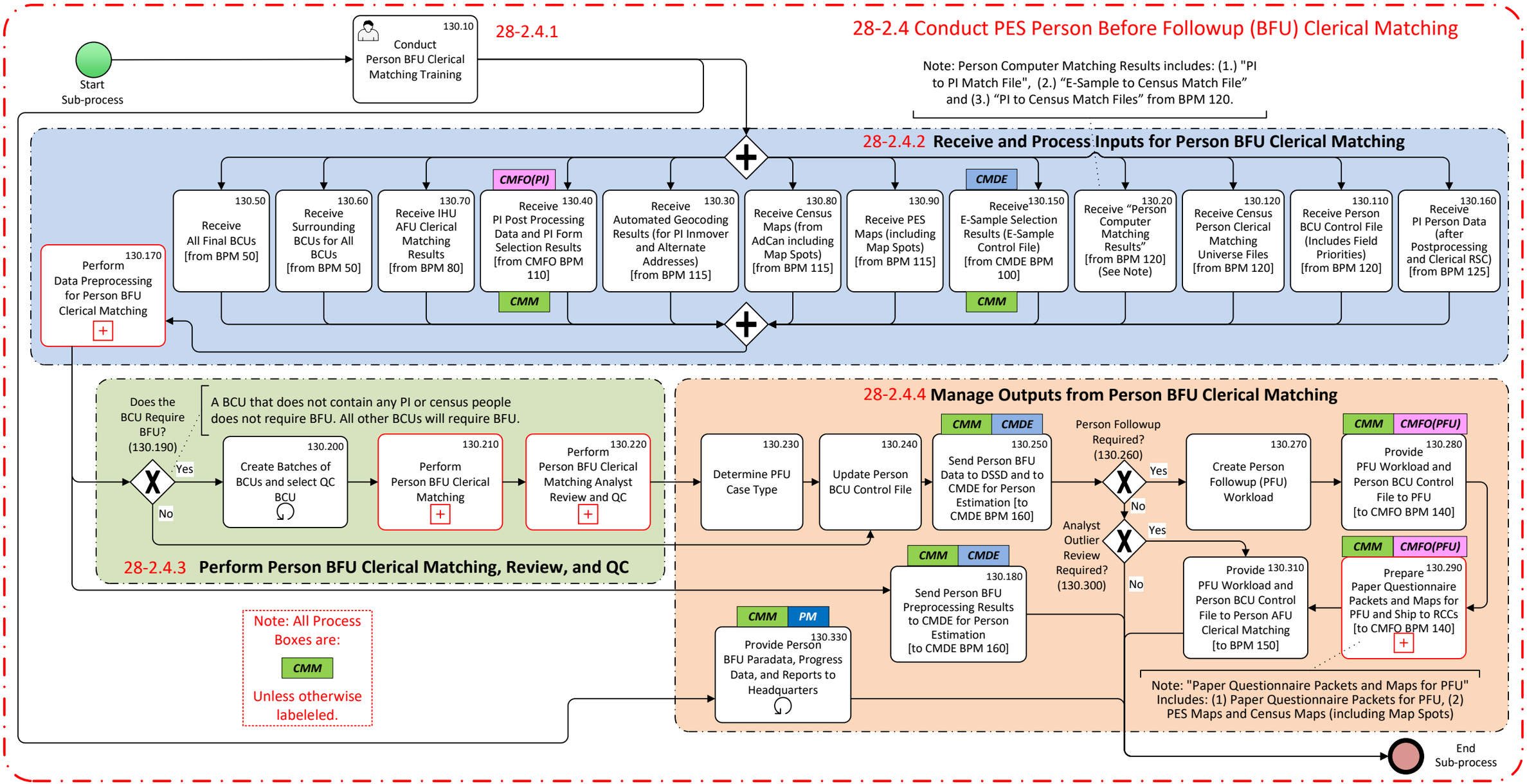
CMM: 125.70 Perform Clerical RSC Analyst Review and QC

Purpose: The Clerical RSC Analysts perform quality control of RSC Technicians' work and review technician referrals.



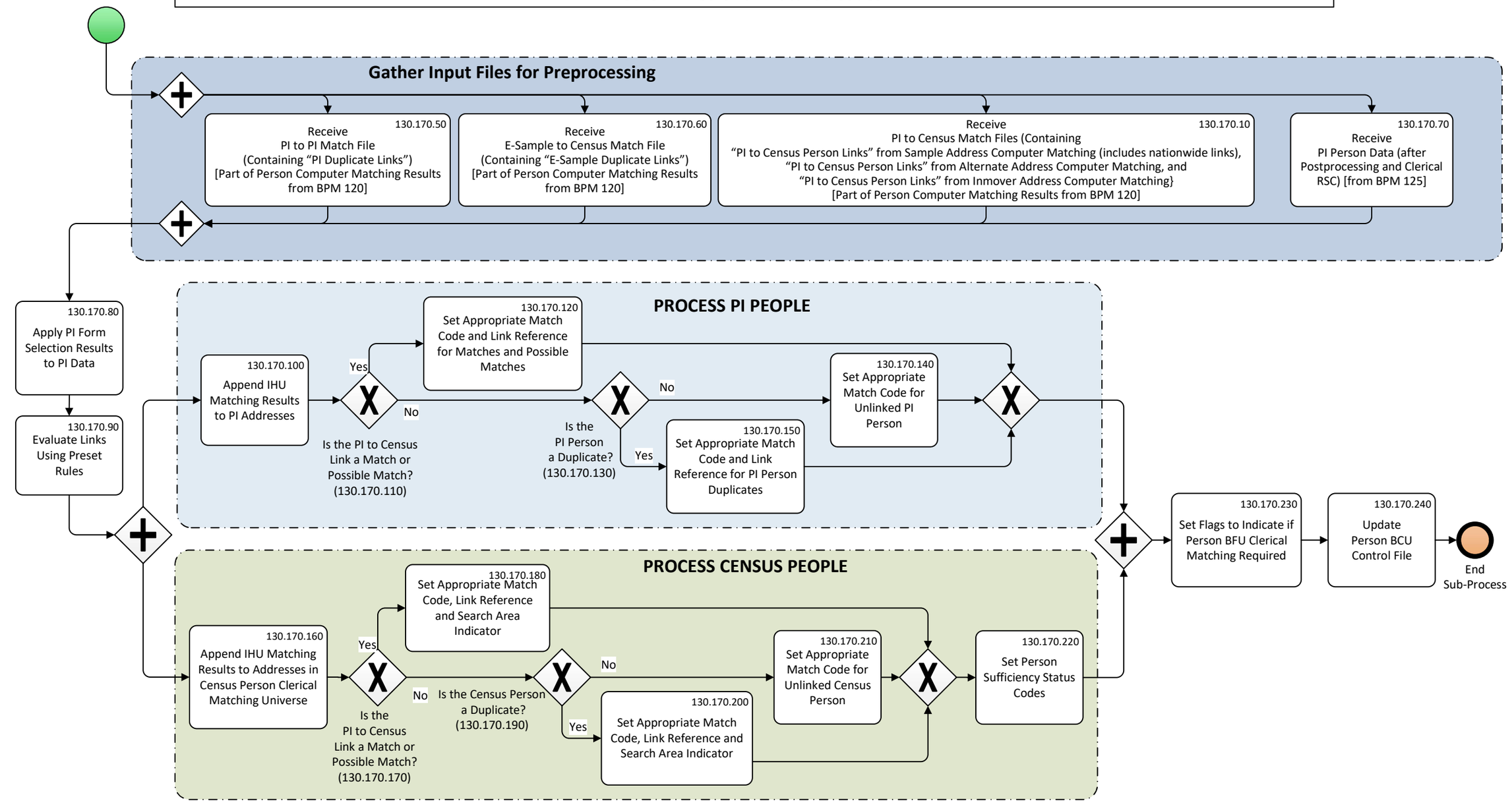
CMM: 130 Conduct PES Person Before Followup (BFU) Clerical Matching

Purpose: Unresolved cases resulting from the PES Person Computer Matching efforts must be manually processed to resolve issues that are not addressed through computer matching, and to identify cases that need field Person Followup to resolve the case.



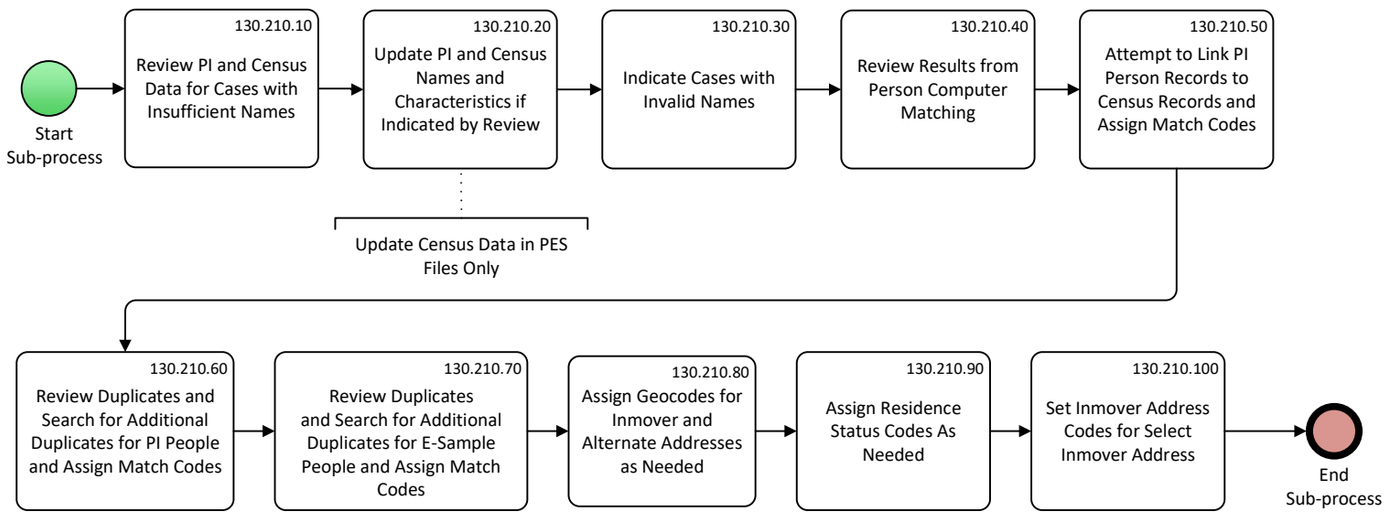
CMM: 130.170 Perform Data Preprocessing for Person BFU Clerical Matching

Purpose: Links from Person Computer matching are used to assign: census to PI person match codes, census or PI duplicate (match) codes and other linked or unmatched codes.



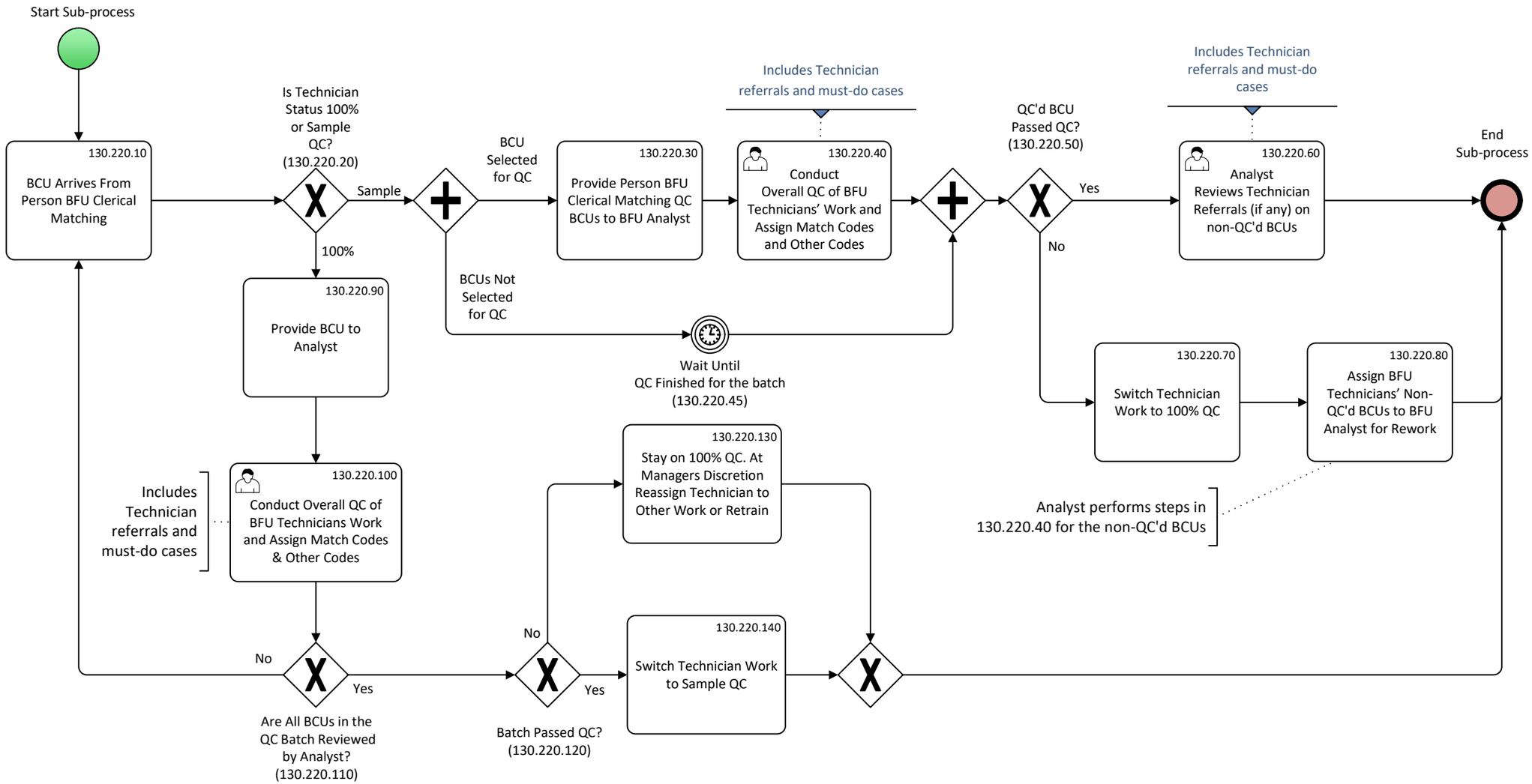
CMM: 130.210 Perform Person BFU Clerical Matching

Purpose: Person BFU Clerical Matching uses results from person computer matching to identify errors, duplicates, and additional matches



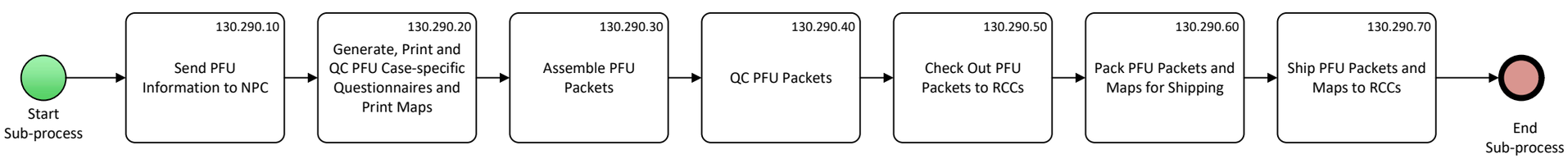
CMM: 130.220 Perform Person BFU Clerical Matching Analyst Review and QC

Purpose: The Clerical Matching Analysts perform quality control of Person BFU Technicians' work and review technicians' referrals.



CMM: 130.290 Prepare Paper Questionnaire Packets and Maps for PFU and Ship to RCCs

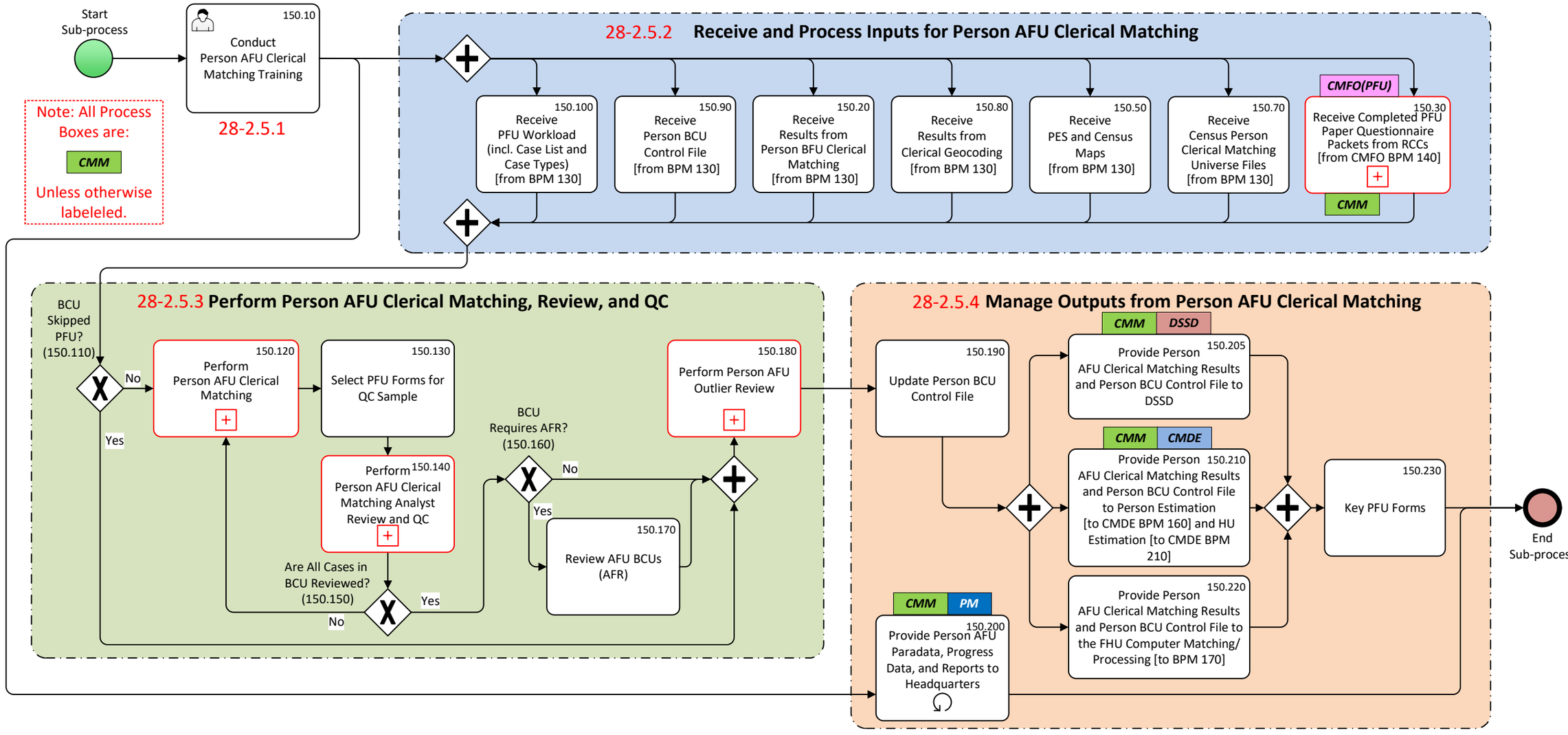
Purpose: To manage the preparation of paper questionnaires and packages for use during PFU field work.



CMM: 150 Conduct PES Person After Followup (AFU) Clerical Matching

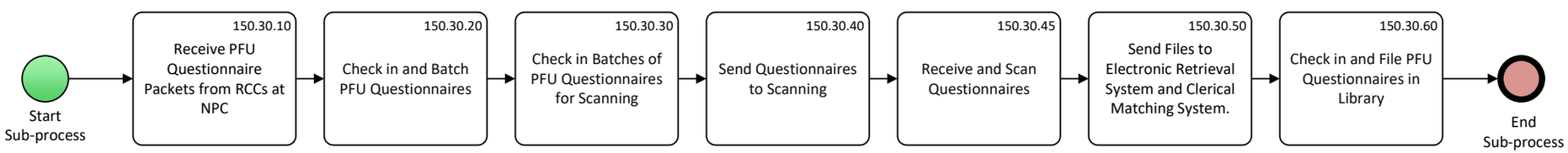
Purpose: Person AFU Clerical Matching uses PFU data to resolve cases that required followup.

28-2.5 Conduct PES Person After Followup (AFU) Clerical Matching



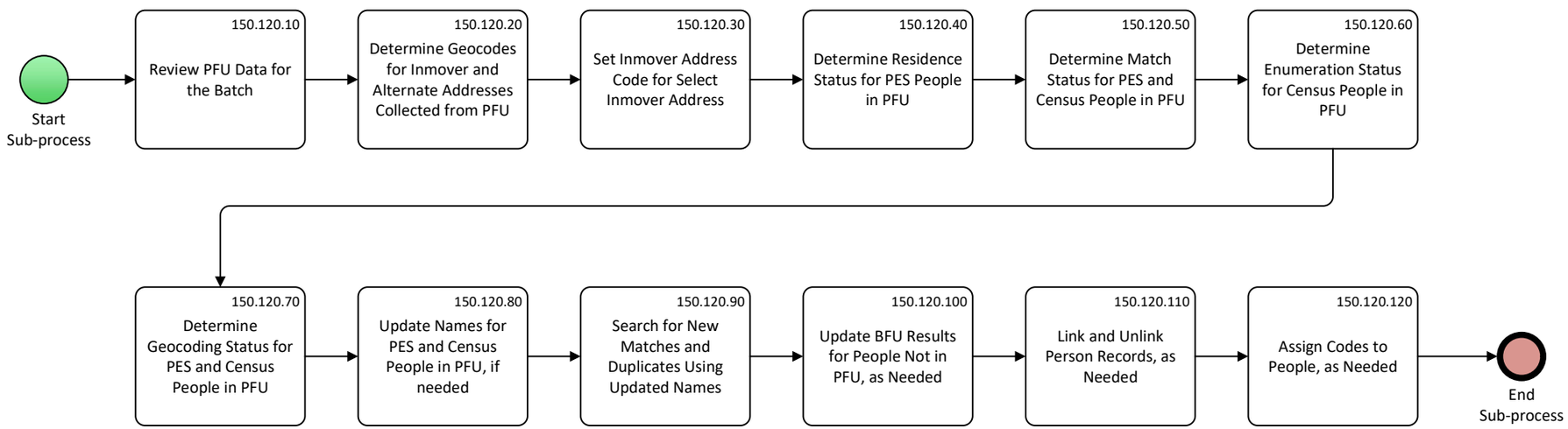
CMM: 150.30 Receive Completed PFU Paper Questionnaire Packets from RCCs

Purpose: This process receives, scans, and files PFU paper questionnaires.



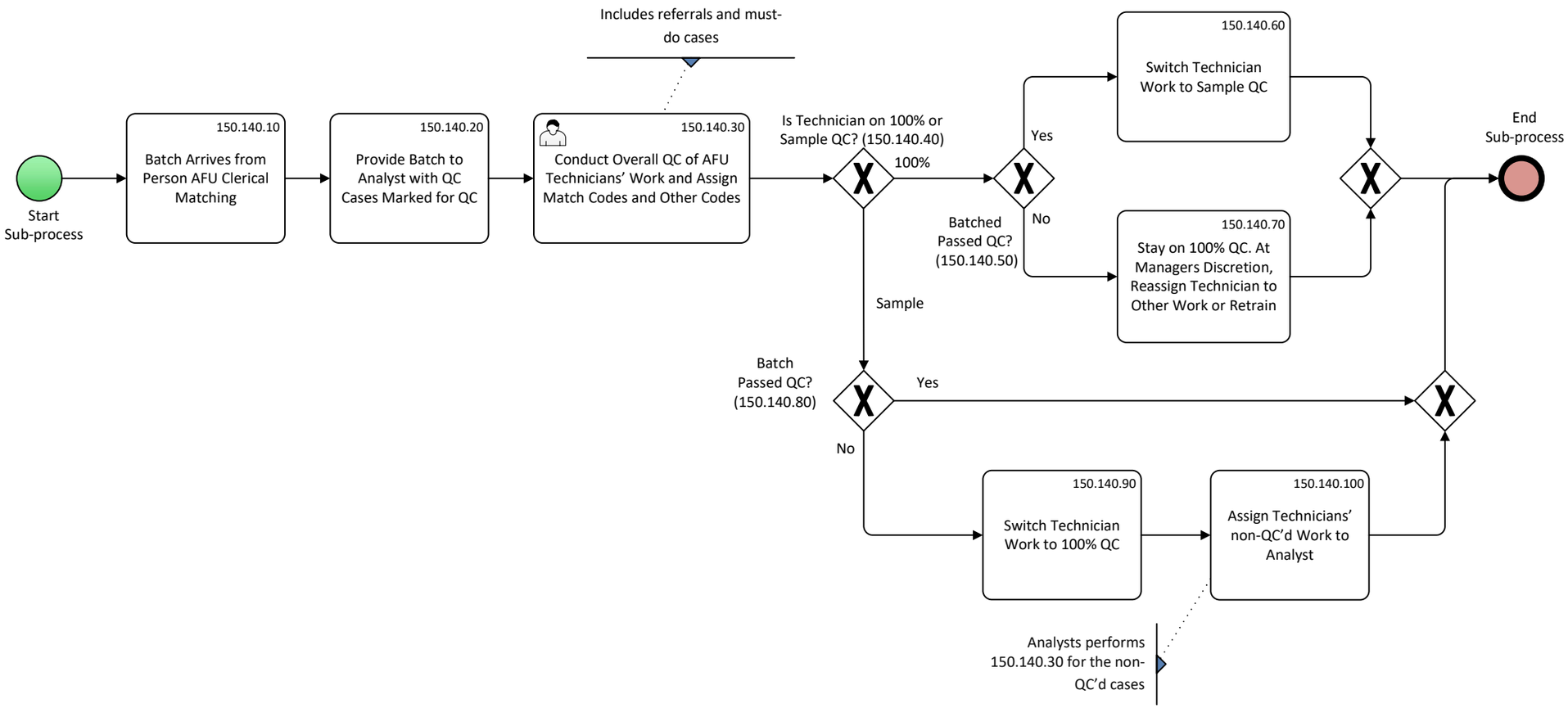
CMM: 150.120 Perform Person AFU Clerical Matching

Purpose: Person AFU Clerical Matching uses PFU data to resolve cases that require followup.



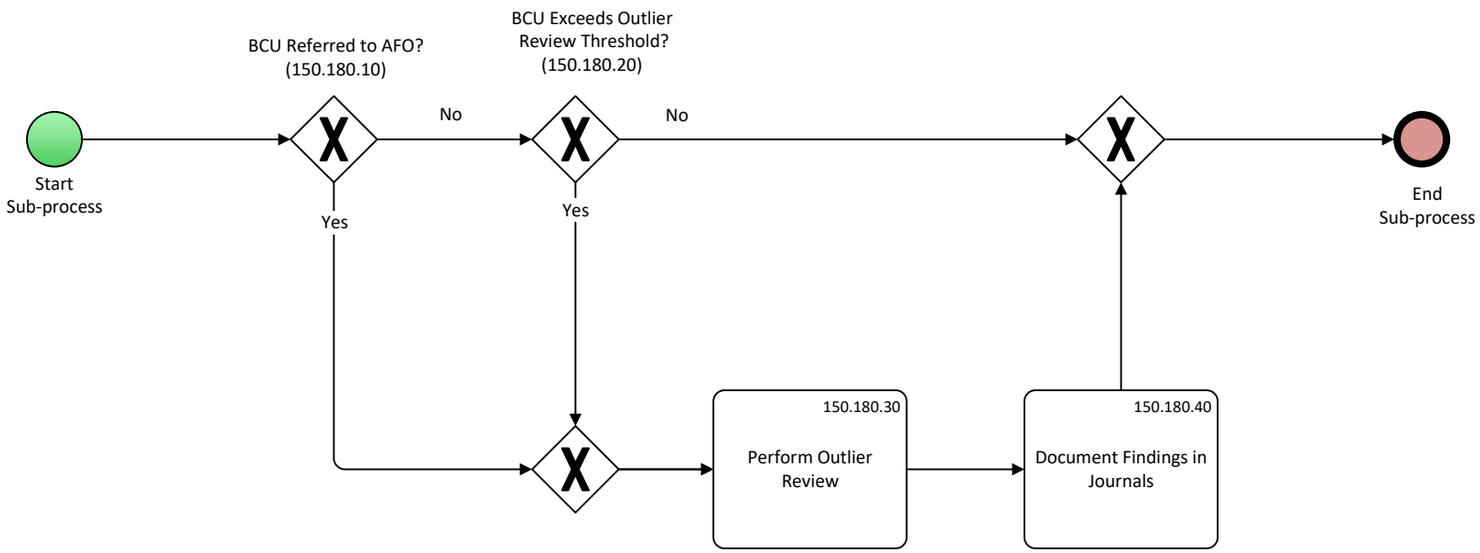
CMM: 150.140 Perform Person AFU Clerical Matching Analyst Review and QC

Purpose: The Clerical Matching Analysts perform quality control of Person AFU Technicians' work and review technician referrals.



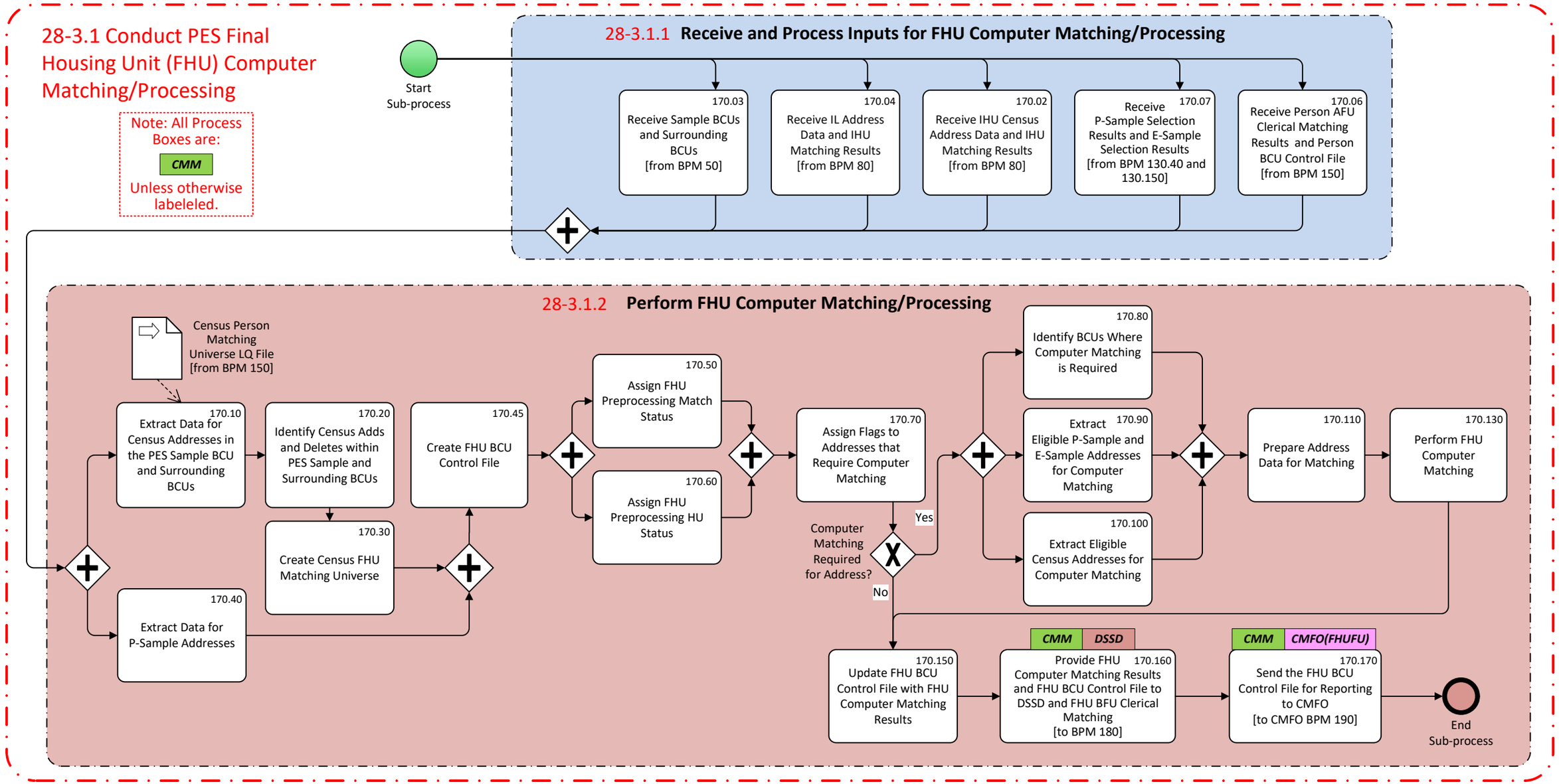
CMM: 150.180 Perform Person AFU Outlier Review

Purpose: Analysts will review BCUs that have been selected for Person AFU Outlier (AFO) review to recode any cases that may be incorrectly coded and write journals to explain any unusual conditions or problems with the BCUs.



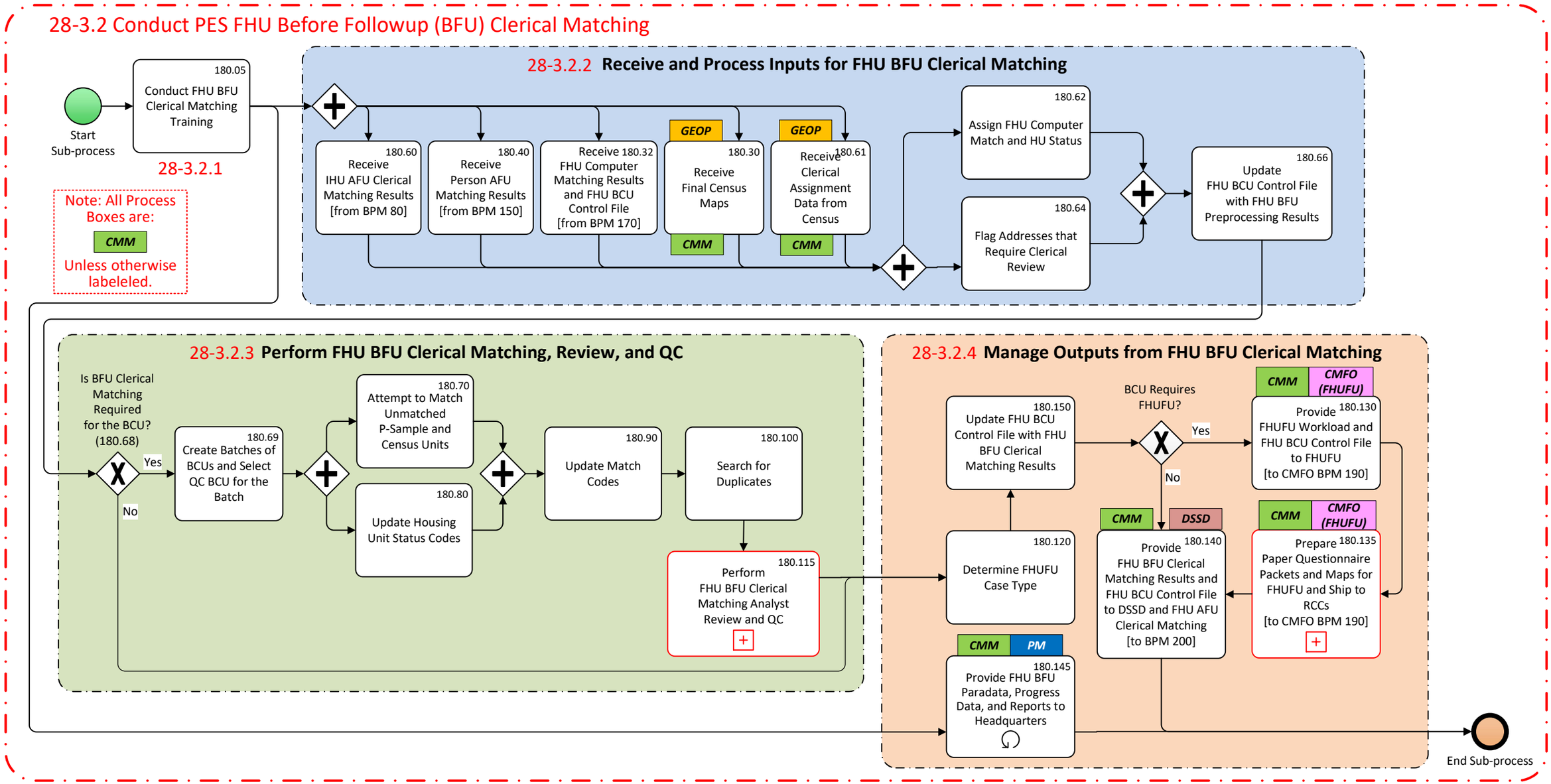
CMM: 170 Conduct PES Final Housing Unit (FHU) Computer Matching/Processing

Purpose: PES Final Housing Unit Computer Matching matches housing unit addresses between the PES P Sample and the final census address list.



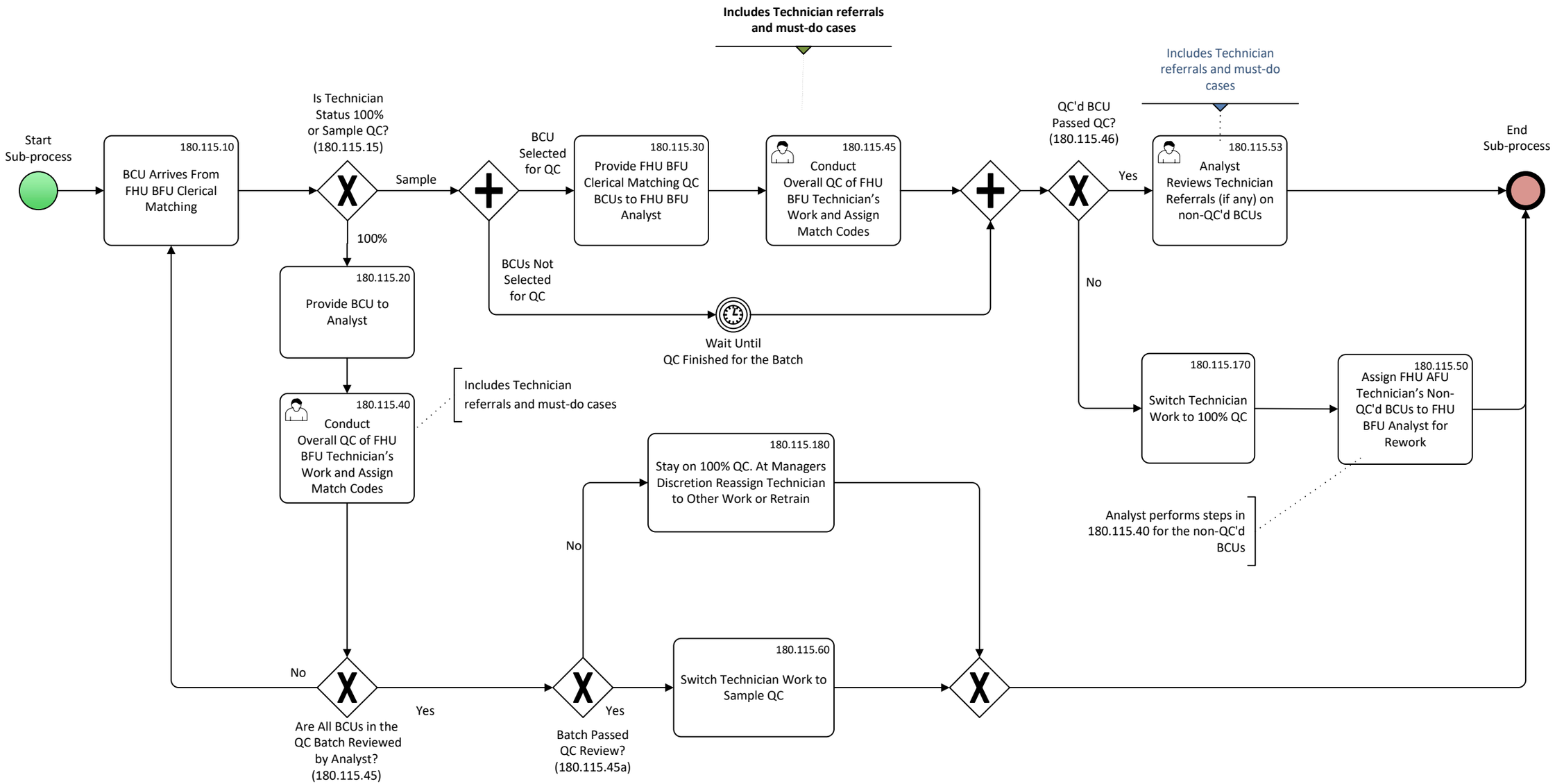
CMM: 180 Conduct PES FHU Before Followup (BFU) Clerical Matching

Purpose: To manually process unresolved cases after Final Housing Unit Computer Matching/Processing.



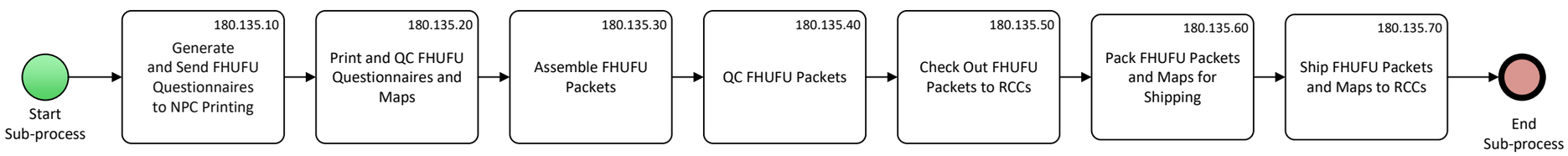
CMM: 180.115 Perform FHU BFU Clerical Matching Analyst Review and QC

Purpose: The Clerical Matching Analysts perform quality control of FHU BFU Technicians' work and review technicians' referrals.



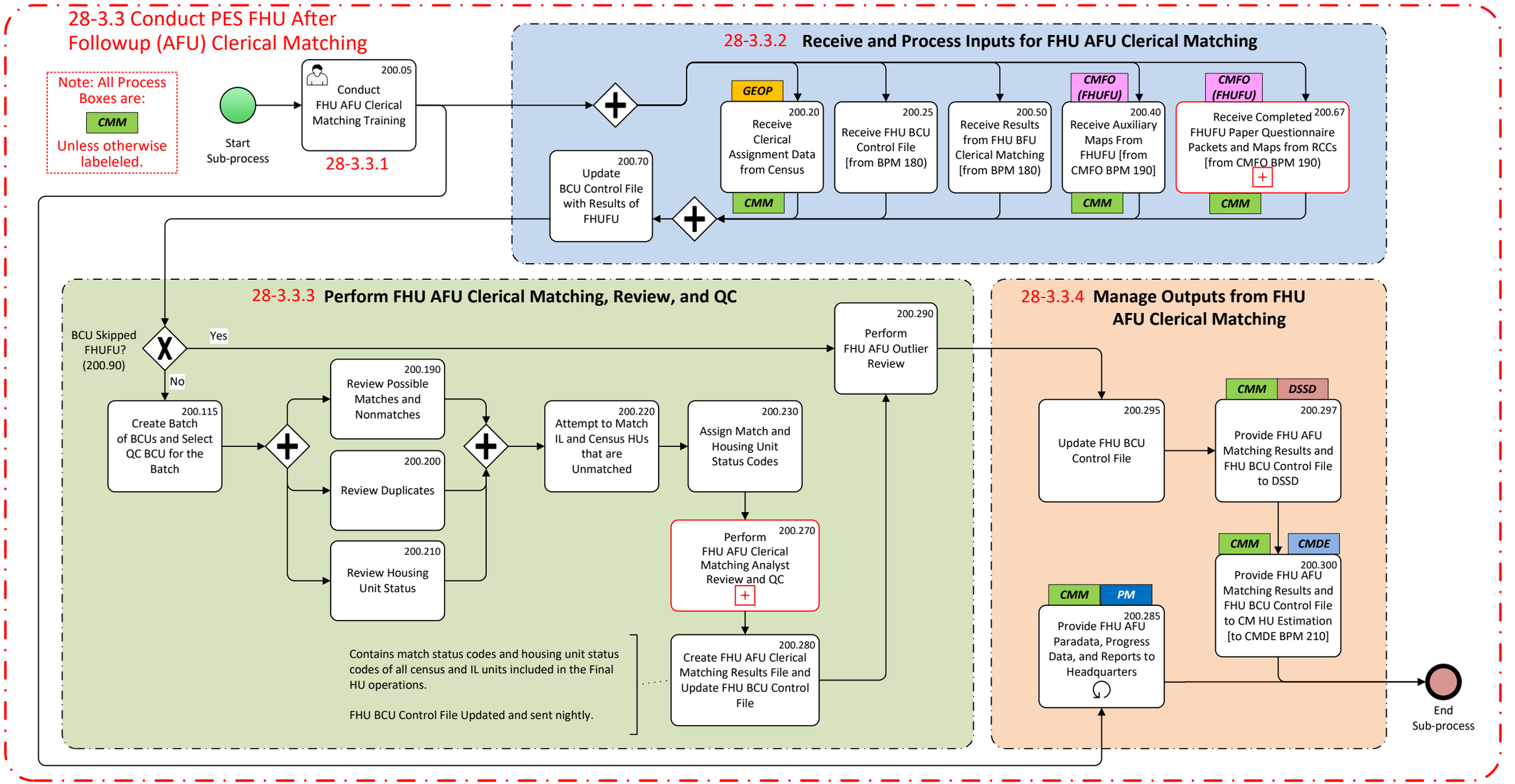
CMM: 180.135 Prepare Paper Questionnaire Packets and Maps for FHUFU and Ship to RCCs

Purpose: To manage the preparation of paper questionnaires and packages for use during FHUFU field work.



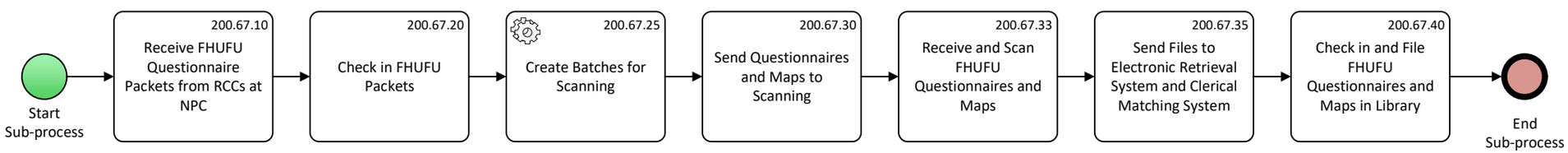
CMM: 200 Conduct PES FHU After Followup (AFU) Clerical Matching

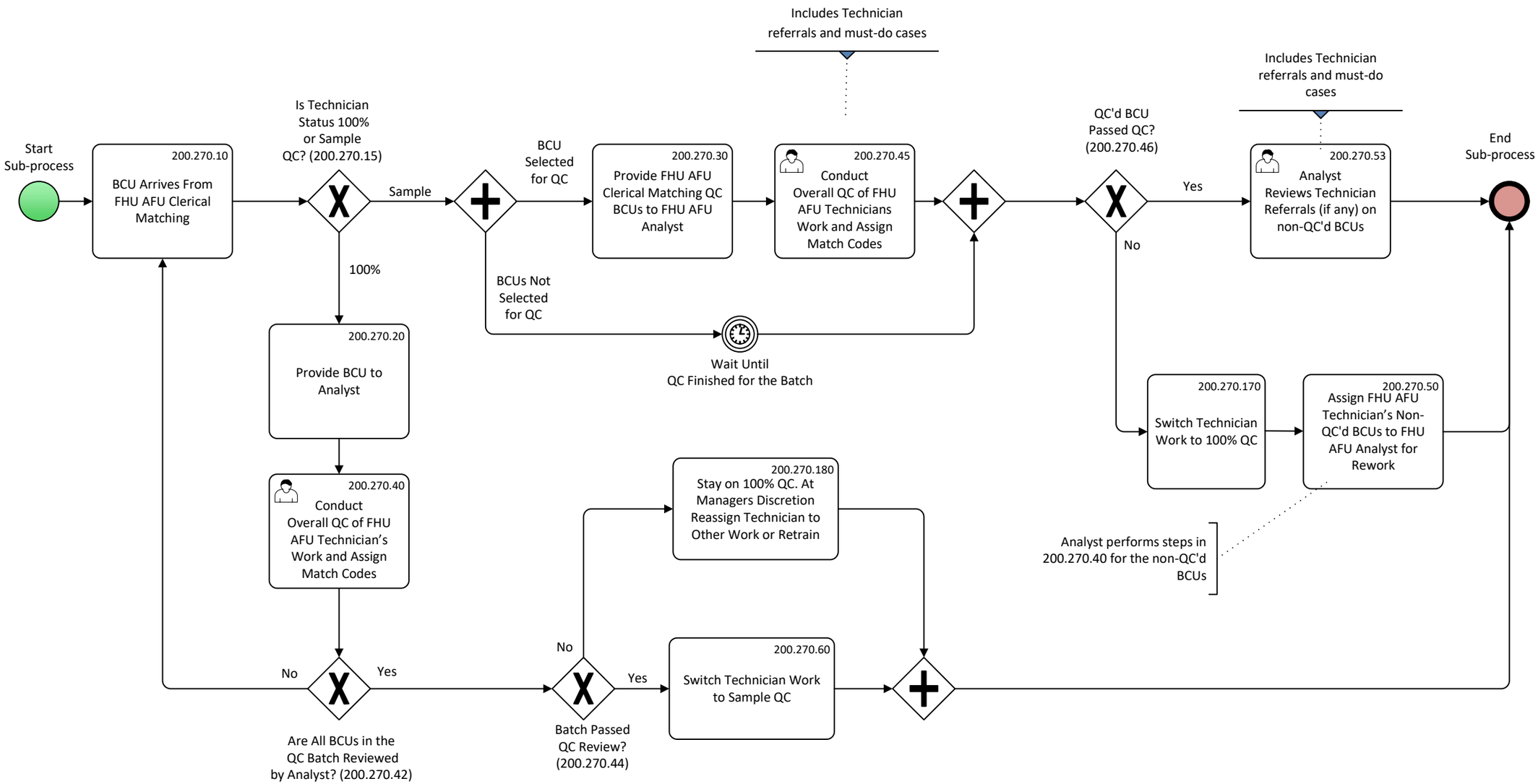
Purpose: PES FHU AFU Clerical Matching uses FHUFU data to resolve cases that were sent to followup.



CMM: 200.67 Receive Completed FHUFU Paper Questionnaire Packets and Maps from RCCs

Purpose: To receive the FHUFU paper questionnaires



CMM: 200.270 Perform FHU AFU Clerical Matching Analyst Review and QC

Purpose: The Clerical Matching Analysts perform quality control of FHU AFU Technicians' work and review technicians' referrals.